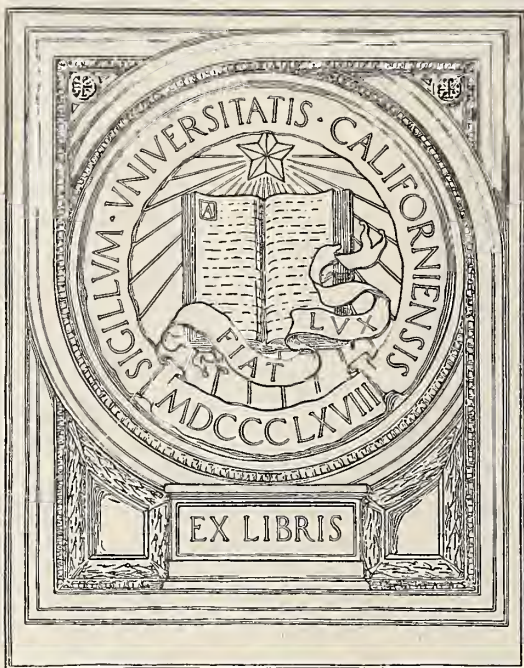


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INDEX TO VOLUME XXX

- Abdomen, Surgery of the Upper (Sams), 287.
- Ablatio Placentae; A Report of Four Cases: Case Report (Whiteley and Dorsey), 231.
- Abscess, Pharyngo-Maxillary (Palmer), 79.
- Abt, Isaac A.; Pneumonia in Childhood, 173.
- Acute and Chronic Sinus Disease. More about That Bane of the Rhinologist's Existence (Carroll), 228.
- Allergy, The Food Factor in (Piness and Miller), 405.
- Anderson, Cyrus W.; Natural Avoidance of Conception, 223.
- Anemia, The Neurologic Diagnosis of Pernicious. With Remarks on Treatment: Early Diagnosis (Daniels), 185.
- Anent Medical Care of the Indigent in Wyoming (Beck), 524.
- Anesthesia in Thyroid Surgery, Local (Van Meter), 344.
- Aneurysm, Coincident Dissecting, of Thoracic Aorta and Saccular, of Abdominal Aorta: Case Report (Pampmeier and White), 299.
- Appendicitis, Factors Affecting Mortality in Acute (Packard), 322.
- Appendix As a Cause of Disturbances Connected with Abdominal Nerves and Lymphatics, The Obliterating (Freeman), 320.
- Appendix, Carcinoma of the: Case Report (Smith), 351.
- Appendix, Cystic. With Report of Three Cases (Likes), 327.
- Appendix Vermiformis, The Medical and Surgical History of the (Grant), 280.
- Association of Eczema With Alteration in Gastric Secretions, the (Philpott), 295.
- Atrophic Cirrhosis of the Liver: Case Report (Lee), 302.
- Auditory Disturbances Following Mumps, Transitory Vestibular and: Case Report (Frumess), 56.
- Barnard, Hamilton I. and Packard, Robert G.; Complications in the Treatment of Congenital Dislocation of the Hip, 248.
- Barnard, Hamilton I.; Mild Compression Fractures of the Spine: Early Diagnosis, 265.
- Beck, F. L.; Anent Medical Care of the Indigent in Wyoming, 524.
- Beebe, N. L.; The "Birth" of a Submucous Uterine Fibroid: Case Report, 186.
- "Birth" of a Submucous Uterine Fibroid, the: Case Report (Beebe), 186.
- Blood Count, The Schilling (Finney and Dunlop), 212.
- Blood Pictures in Average Healthy Infants During the First Six Months (Washburn), 413.
- Boissevain, C. H.; The Presence of Fluorine of the Water Supply of Colorado and Its Relation to the Occurrence of Mottled Enamel, 142.
- Book Reviews:**
- Adler, Francis Heed, Clinical Physiology of the Eye, 429.
- American Medical Association, Annual Report of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association, 1932, June Sixteen.
- American Medical Association, Council on Pharmacy and Chemistry, New and Nonofficial Remedies, 1933, June Sixteen.
- Balyeat, Ray M., Wheat, Egg, or Milk Free Diets, 269.
- Bargen, J. Arnold, and Rankin, Fred W., The Colon, Rectum and Anus, 235.
- Bartlett, Frederic H., Infants and Children. Their Feeding and Growth, 154.
- Bassoe, Peter, Editor, Neurology-Psychiatry, 1931, 150.
- Beekman, Fenwick, Office Surgery, 357.
- Bland, P. Brooke, Practical Obstetrics for Students and Practitioners, 429.
- Bourne, Aleck W., and Williams, Leslie H., Recent Advances in Obstetrics and Gynecology, 357.
- Boyd, William, A Text-Book of Pathology, 191.
- Bryant, Louise S., and Dickinson, Robert L., Medical Aspects of Human Fertility, 59.
- Buckstein, Jacob, Functional Disorders of the Large Intestine and their Treatment, 393.
- Cannon, Walter B., The Wisdom of the Body, 234.
- Cantarow, Abraham, Calcium Metabolism and Calcium Therapy, 269.
- Christopher, Frederick, Minor Surgery, 23.
- Committee on the Treatment of Fractures, An Outline of the Treatment of Fractures, Second Edition, 429.
- Copeland, Murray M., and Geschickter, Charles F., Tumors of Bone, 236.
- Crile, George, and Associates, Diagnosis and Treatment of Disease of the Thyroid Gland, 235.
- Cutsworth, Thomas D., The Blind in School and Society, 235.
- DaCosta, J. Chalmers, and Gross, Samuel S., Modern Surgery, 189.
- DeLee, Joseph B.; Principles and Practice of Obstetrics, 393.
- Dickinson, Robert L., and Bryant, Louise S., Medical Aspects of Human Fertility, 59.
- Dittrick, Howard, Compiled by, Pioneer Medicine in the Western Reserve, 153.
- Dooley, M. S., Chairman, Intern's Handbook, 236.
- Drewitt, F. Dawtrey, Life of Edward Jenner, Naturalist and Discoverer of Vaccination, 23.
- Dunlap, Knight, Habits, Their Making and Unmaking, 190.
- Farley, David L. and Pepper, O. H. Perry, Practical Hematological Diagnosis, 462.
- Feinberg, Samuel M., Asthma, Hay Fever, and Related Disorders, 191.
- Fishbein, Morris, Frontiers of Medicine, 462.
- Fisher, W. A., Senile Cataract. Methods of Operating, 356.
- Fox, George Henry, Reminiscences, 430.
- Gershenfeld, Louis, Urine and Urinalysis, 268.
- Geschickter, Charles F., and Copeland, Murray M., Tumors of Bone, 236.
- Gossett, Walker Bourne, What the Public Should Know About Childbirth, June Eighteen.
- Gross, Samuel D., and DaCosta, J. Chalmers, Modern Surgery, 189.
- Hamman, Louis, Editor, International Clinics, 305.
- Harris, Henry, California's Medical Story, 152.
- Henderson, Lawrence J., Blood, a Study in General Physiology, 190.
- Hewitt, Richard M., and Mellish-Wilson, Mrs. Maud H., Editors, The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1931, 99.
- Hiscock, Ira C., Editor, Community Health Organization, June Fourteen.
- Hogben, Lancelot, Genetic Principles in Medicine and Social Science, 154.
- Hutton, Isabel Emslie, The Sex Technic in Marriage, 190.
- International Clinics, Volume 11, 306.
- Irving, Frederick C., The Expectant Mother's Handbook, 153.
- Jacobs, Philip P., The Control of Tuberculosis in the United States, 100.
- Jarcho, Julius, The Pelvis in Obstetrics, 236.
- Johannessohn, Fritz, Chinin in Der Allgemeinarztpraxis, 269.
- Kaiser, Albert D., Children's Tonsils In or Out, 151.
- Kennedy, James William, Practical Surgery of the Joseph Price Hospital, 153.
- Knopf, S. Adolph; Report to the U. S. Government on Tuberculosis with some Therapeutic and Prophylactic Suggestions, 461.
- Koch, Robert, The Aetiology of Tuberculosis, July Sixteen.
- Latz, Leo J., The Rhythm of Sterility and Fertility in Women, 191.
- Lewis, Sir Thomas, Diseases of the Heart, 356.
- Lewis, Thomas, The Blood Vessels of the Human Skin and Their Responses, 60.
- Looney, William W., Anatomy of the Brain and Spinal Cord, 150.
- Luria, A. R., The Nature of Human Conflicts or Emotion, Conflict and Will. An objective study of disorganization and control of Human Behaviour, 305.
- Madhava, K. B., and McCarrison, Col. R., The Life Line of the Thyroid Gland. A contribution to the study of Goitre, 22.
- Magnuson, Paul B., Fractures, 429.
- Mayer, Edgar, The Curative of Light, Sunlight and Sunlamp in Health and Disease, 59.
- Mazer, Charles, Clinical Endocrinology of the Female, 100.
- McCarrison, Col. R., and Madhava, K. B., The Life Line of the Thyroid Gland. A contribution to the study of Goitre, 22.
- McPheeters, H. O., Varicose Veins, With Special Reference to the Injection Treatment, 22.
- Medical Clinics of North America, The, September, 1932, Volume 16, No. 2, 100.
- Medical Clinics of North America, The, November, 1932, Volume 16, No. 3, 189.
- Medical Clinics of North America, The, January, 1933, Volume 16, No. 4, 269.
- Medical Clinics of North America, The, March, 1933, Volume 16, No. 5, 269.

- Medical Clinics of North America, The, Mayo Clinic Number, May, 1933, Volume 16, No. 6, 430.
- Medical Clinics of North America, The, July 1933, Volume 17, Number 1, 461.
- Mellish-Wilson, Mrs. Maud H., and Hewitt, Richard M., Editors, The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1931, 99.
- Meyer, William H., Clinical Roentgen Pathology of Thoracic Lesions, 99.
- Mumey, Nolie, Iconographic Sketch of Laennec, 59.
- Newsholme, Sir Arthur, Medicine and the State, June Fourteen.
- New York Tuberculosis and Health Association, Pardee, Harold E. B., Chairman, Criteria Committee, Criteria for the Classification and Diagnosis of Heart Disease, 306.
- Pepper, O. H. Perry and Farley, David L., Practical Hematological Diagnosis, 462.
- Piney, A., Diseases of the Blood, 189.
- Poe, James G., Modern General Anesthesia. A Practical Handbook, 22.
- Pusey, William A., History and Epidemiology of Syphilis, 462.
- Pusey, William Allen, A Doctor of the 1870's and 80's, 23.
- Pusey, Wm. Allen, The History of Dermatology, 430.
- Rankin, Fred W., and Borgen, J. Arnold, The Colon, Rectum and Anus, 235.
- Richards, Esther Loring, Behavior Aspects of Child Conduct, 150.
- Robinson, William J., The Law Against Abortion, 357.
- Rothrock, John L., Ten Years of Obstetrics and Gynecology in Pricate Practice, 357.
- Rowe, Allan Winter, The Differential Diagnosis of Endocrine Disorders, 153.
- Rypins, Harold, Medical State Board Examinations, 430.
- Schamberg, Jay F., Treatment of Syphilis, 154.
- Scheffel, Carl, Medical Jurisprudence, 59.
- Sigerist, Henry E., Man and Medicine. An Introduction to Medical Knowledge, 150.
- Stone, Eric, Medicine Among the American Indians, 393.
- Surgical Clinics of North America, The, June, 1931, Volume 11, No. 3, 99.
- Surgical Clinics of North America, The, October, 1931, Volume 11, No. 5, 99.
- Surgical Clinics of North America, The, October, 1932, Volume 12, No. 5, 99.
- Surgical Clinics of North America, The, December, 1932, Volume 12, No. 6, July Eighteen.
- Surgical Clinics of North America, The, February, 1933, Volume 13, No. 1, July Eighteen.
- Swanberg, Harold, Radiologic Maxims, 234.
- Tate, Magnus A., Editor, Transactions of The American Association of Obstetricians and Abdominal Surgeons, 357.
- Timme, Walter, Lectures on Endocrinology, 234.
- Van De Velde, Th. H., Fertility and Sterility in Marriage, Their Voluntary Promotion and Limitation, 152.
- White House Conference, Growth and Development of the Child, Part III, 462.
- White House Conference on Health and Protection, Hammill, Samuel McC., Chairman, Nutrition Service in the Field: Report of the Subcommittee on Nutrition, 189.
- Williams, Leonard, Minor Maladies, 461.
- Williams, Leslie H., and Bourne, Aleck W., Recent Advances in Obstetrics and Gynecology, 357.
- Wright, William Cave, Translator, History of Medicine Series, 23.
- Wyatt, Bernard Langdon, Chronic Arthritis and Fibrositis, 430.
- Bortree, L. W.; The Clinical Care of Coronary Disease, 10.
- Brown, John Z.; The Industrial Commission of Utah and Its Relation to the Medical Profession, 33.
- Brown, Thad C.; Methylene Blue in Carbon Monoxide Poisoning: Case Report, 302.
- Bundsen, Chas. A.; Transfusion of Blood in Tuberculosis. A Report of 50 cases, 385.
- Bunten, W. Andrew; The Thyroid Gland From the Medical and Surgical Standpoint, 114.
- Burns, The Treatment of (Madler), 46.
- Burns, T. Mitchell; The Unanimity of the Pregnancy, Menstrual, and Estrus Cycles, 381.
- Cancer, Gastric: Early Diagnosis (Dixon), 229.
- Carbon Monoxide Poisoning, Methylene Blue in: Case Report (Brown), 302.
- Carcinoma of the Appendix: Case Report (Smith), 351.
- Carrol, Frank; Acute and Chronic Sinus Disease. More About That Bane of the Rhinologist's Existence, 228.
- Childhood, Pneumonia in (Abt), 173.
- Cirrhosis, Atrophic, of the Liver: Case Report (Lee), 302.
- Clinical Care of Coronary Disease, the (Bortree), 10.
- Coincident Dissecting Aneurysm of Thoracic Aorta and Saccular Aneurysm of Abdominal Aorta: Case Report (Kampmeier and White), 299.
- Colitis, Spastic (Hick), 209.
- Complications in the Treatment of Congenital Dislocation of the Hip (Packard and Barnard), 248.
- Conception, Natural Avoidance of (Anderson), 223.
- Connell, Joseph E. A.; Severe Infections of the Hand: Early Diagnosis, 17.
- Cooper, C. E.; Doctor, Patient and State, 122.
- Coronary Disease, The Clinical Care of (Bortree), 10.
- Corrective Treatment of Compression Fractures of the Spine (Thomas and Sevier), 252.
- Country Practice, Fifteen Years of (Hardesty), 420.
- Crisp, William H.; Improved Surgical Prognosis in Simple Glaucoma, 450.
- Cystic Appendix. With Report of Three Cases (Likes), 327.
- Daniels, Luman E.; The Neurologic Diagnosis of Pernicious Anemia. With Remarks on Treatment: Early Diagnosis, 185.
- Death, The Privilege of (Wanner), 71.
- Demonstration of Normal and Pathological Nephroptosis a (Wear), 333.
- Dennis, Wilfred S.; Pellagra in Colorado, 423.
- Denver Sewage Problem, the (Hall), 456.
- Didelphys Uterus: Case Report (Schroeder), 301.
- Discussion of Some Recent Advances in the Commoner Nervous Diseases, a (Weisenburg), 41.
- Dixon, R. K.; Gastric Cancer: Early Diagnosis, 229.
- Doctor, Patient and State (Cooper), 122.
- Dorsey, C. W. and Whiteley, P. W.; Ablatoo Placentae; A Report of Four Cases: Case Report, 231.
- Dunlop, Josephine N. and Finney, Royal H.; The Schilling Blood Count, 212.
- Earnest, C. E.; Lipiodol Injection of Nasal Sinuses, 77.
- Economic Do's and Dont's for the Medical Society (Sethman), 135.
- Eczema With Alternation in Gastric Secretions, The Association of (Philpott), 295.
- Edema, The Mechanism of (Sears), 50.

Editorials—Colorado:

- Actions of the National Conference of State Secretaries and Journal Editors, 37.
- "Age Cannot Withstand Custom Stale", 172.
- Agranulocytosis, 246.
- Alcohol Content of Beer, 120.
- Alleged Malpractice, 247.
- Amebic Dysentery, 445.
- American Medical Directory, the 1934, 368.
- American Public Health Association Commends Colorado, 278.
- Annual Registration in Kansas, 369.
- Annual Secretaries and Editors' Conference, 402.
- Appendicitis Death Rate, 76.
- Biological Factors in Epilepsy, 318.
- Bogey of State Medicine, the, 73.
- Calcium Therapy, 246.
- Caloric Value of Beer, 278.
- Christmas and Medical Costs, 1.
- Chronic Bone Disease and the Parathyroid Glands, 247.
- Colorado on the Black List, 278.
- Committee on the Costs of Medical Care—Final Report, 2.
- Constructive Plan for Post-Depression Readjustment, a, 443.
- Correspondence, 76, 172.
- Does the N. R. A. Concern the Physician?, 317.
- Dollars and Sense, 74.
- Dr. J. N. Hall Feted After Fifty Years in Colorado, 366.
- Dr. Rorem on Medical Costs, 74.
- Economics Conference, 206.
- Economics of Group Practice, 319.
- Enemies of Society, 119.
- E. Pluribus Unum?, 205.
- Essential Hypertension, 403.
- Heredity in Diabetes, 279.
- Honors to Colorado Men, 367.
- Immediate Causes of Death in Cancer, 279.
- Impressions From A. M. A. Meeting, 245.
- Increase Medical Society Membership, 120.
- Insulin by Mouth?, 208.
- Is Poverty a Hardship?, 318.
- Label Boric Acid Solutions "Poison", 208.
- Liver Function, 76.
- Medical Societies Must Control Medical Service, 3.
- Midwinter Clinics, the, 39.
- Milestones of Medical Progress, 277.

More About Samples, 404.
 Move to Limit the Production of Physicians, a, 40.
 N. A. Madler, 366.
 New Light Upon Atomic Structure, 208.
 Nobel Prize in Medicine, 40.
 Our Advertisers, 172.
 Our Advertisers Earn Your Preference, 404.
 Oversupply of Physicians, 247.
 Oxygen in Pneumonia, 120.
 Pay-the-Hospital Plans, 40.
 Possible Etiologic Factor in the Common Cold, a, 444.
 Press Muddies the Waters, the, 401.
 Remove the Label, 121.
 Sickness Savings Funds—A Suggestion, 445.
 Sixty-Third Annual Session, the, 368.
 Sixty-Third Annual Session—Colorado Springs, 318.
 Special Attention to December's Colorado Medicine, 446.
 Spread the Word, 3.
 Status of the Coffey-Humber Extract, 121.
 Substantial Gift to the School of Medicine, 446.
 Third International Goiter Conference to Come to America, 368.
 Vaccinate Out Smallpox, 446.
 Vaccine Treatment of Pertussis, 40.
 Way of Health Insurance, the, 169.
 Yeast Testimonials, 208.
 Your Membership is Vital, 39.

Editorials—Wyoming:

Abscess of the Tongue, 69.
 Announcement, 275.
 Cardiospasm or Diaphragmatic Hernia?, 198.
 Colorado Springs Meeting, the, 363.
 Colorado Tick Fever, 523.
 Confidence—That's the Stuff!, 166.
 Do You, or Do You Not, Want a State Society Meeting This Year?, 243.
 Dues, Please!, 113.
 Hang Them Up, 398.
 Infected Tear Sac, the, 438.
 Loyal Friends, 199.
 Our President's Message, 523.
 Out Where the Ticks Begin, 166.
 Pay Your State Medical Dues in January, 31.
 Protect Wyoming's Children, 438.
 Pupillary Sign of Death, the, 363.
 Real Governor, a, 31.
 Recent Legislature, the, 167.
 Regulations Passed by State Board of Health Governing the Conduct of Tourist Camp Grounds, 314.
 She Gave Birth to a Mosquito, 314.
 She Sleeps—My Baby Sleeps, 69.
 Southwestern Wyoming Medical Society, the, 398.
 State Board of Health, 198.
 Tonsil Stump, the, 113.
 Urgent Need for More Tick Serum, the, 275.
 When Winter Comes, 31.
 Wyoming Legislation, 113.
 Wyoming State Meeting Abandoned for Season, 276.
 Yellowstone Park Meeting Postponed, 242.
 Extensive Injury By a Mushroom Bullet: Case Report (Porter), 354.
 Factors Affecting Mortality in Acute Appendicitis (Packard), 322.
 Fibroid, the "Birth" of a Submucous Uterine: Case Report (Beebe), 186.
 Fifteen Years of Country Practice (Hardesty), 420.
 Finney, Royal H. and Dunlop, Josephine N.; The Schilling Blood Count, 212.
 Finnoff, William C.; On the Management of Ocular Injuries, 7.
 Fluorine in the Water Supply of Colorado and Its Relation to the Occurrence of Mottled Enamel, the Presence of (Boissevain), 142.
 Focal Infections, Paranasal Sinus Pathology and (Wherry), 439.
 Food Factor in Allergy, the (Piness and Miller), 405.
 Fractures of the Spine, Corrective Treatment of Compression (Thomas and Sevier), 252.
 Fractures of the Spine, Mild Compression: Early Diagnosis (Barnard), 265.
 Frank, Lorenz W.; The Physician Looks at Himself, 262.
 Freeman, Leonard; The Obliterating Appendix as a Cause of Disturbances Connected with Abdominal Nerves and Lymphatics, 320.
 Frumess, Gerald M.; Transitory Vestibular and Auditory Disturbances Following Mumps: Case Report, 56.
 Gastric Cancer: Early Diagnosis (Dixon), 229.
 General Principles of Radiation Therapy of Tumors, the (Wasson), 257.

Gilbert, O. M.; Pneumoperitoneum in the Treatment of Tuberculous Peritonitis, 296.
 Glaucoma, Improved Surgical Prognosis in Simple (Crisp), 450.
 Goiter Prophylaxis, Means and Methods of (Shivers), 345.
 Grant, W. W.; The Medical and Surgical History of the Appendix Vermiformis, 280.
 Gunshot Injuries of the Skull with Intracranial Retention of the Projectile, Non-Fatal (Schmidt), 375.
 Hall, Ivan C.; The Denver Sewage Problem, 456.
 Halley, William H. and Whiteley, Philip W.; Uterine Hemorrhage, 340.
 Hand, Severe Infections of the: Early Diagnosis (Connell), 17.
 Hardesty, W. B.; Fifteen Years of Country Practice, 420.
 Head Injuries, Surgical Indications in (Keegan), 447.
 Health Examinations in Schools (Jackson), 215.
 Hematocolpos and Hematosalpinx in a Young Girl: Case Report (Levine), 97.
 Hematosalpinx in a Young Girl, Hematocolpos, and: Case Report (Levine), 97.
 Hemorrhage, Uterine (Halley and Whiteley), 340.
 Hick, Lawrence, L.; Spastic Colitis, 209.
 Hip, Complications in the Treatment of Congenital Dislocation of the (Packard and Barnard), 248.
 Howell, W. C.; Hyperinsulinism: Case Report, 457.
 Humidity (Irwin), 418.
 Hyperinsulinism: Case Report (Howell), 457.
 Ileus, Postoperative Paralytic (Phifer and Rae), 290.
 Improved Surgical Prognosis in Simple Glaucoma (Crisp), 450.
 Industrial Commission of Utah and Its Relation to the Medical Profession, the (Brown), 33.
 Infants During the First Six Months, Blood Pictures in Average Healthy (Washburn), 413.
 Infections of the Hand, Severe: Early Diagnosis (Connell), 17.
 Injury By a Mushroom Bullet, Extensive: Case Report (Porter), 354.
 Iritis, Its Cause, Management, and Treatment (Sidwell), 4.
 Irwin, Robert S.; Humidity, 418.
 Jackson, Edward; Health Examinations in Schools, 215.
 Kampmeier, R. H. and White, J. W.; Coincident Dissecting Aneurysm of Thoracic Aorta and Saccular Aneurysm of Abdominal Aorta: Case Report, 299.
 Keegan, J. Jay; Surgical Indications in Head Injuries, 447.
 Knuckey, C. T.; Obstetrics From the Standpoint of the General Practitioner, 338.
 Lee, George H.; Retroperitoneal Lipoma: Case Report, 388.
 Lee, Paul A.; Atrophic Cirrhosis of the Liver: Case Report, 302.
 Levine, S. J.; Hematocolpos and Hematosalpinx in a Young Girl: Case Report, 97.
 Levy, Robert; Progress in Otolaryngology, 85.
 Library Notes, 234, 392.
 Likes, Lanning E.; Cystic Appendix. With Report of Three Cases, 327.
 Lipiodol Injection of Nasal Sinuses (Earnest), 77.
 Lipoma, Retroperitoneal: Case Report (Lee), 388.
 Liver, Atrophic Cirrhosis of the: Case Report (Lee), 302.
 Local Anesthesia in Thyroid Surgery (Van Meter), 344.
 Madler, N. A.; The Treatment of Burns, 46.
 Mead, Ella; Some Clinical Aspects of Tumors of the Breast, 289.
 Means and Methods of Goiter Prophylaxis (Shivers), 345.
 Mechanism of Edema, the (Sears), 50.
 Medical and Surgical History of the Appendix Vermiformis, the (Grant), 280.
 Medical Biography; Mitchell, Silas Weir, 24, 61, 101, 155, 192, 237, 270, 307, 358, 394, 431, 463.
 Medical School and Its Hospitals into Oblivion, Shall We Legislate the (Tepley)?, 139.
 Medical Treatment of Disease of the Accessory Sinuses (Peirce and Prior), 81.
 Methylene Blue in Carbon Monoxide Poisoning: Case Report (Brown), 302.
 Mild Compression Fractures of the Spine: Early Diagnosis (Barnard), 265.
 Miller, Hyman, and Piness, George; The Food Factor in Allergy, 405.
 Natural Avoidance of Conception (Anderson), 223.
 Nephroptosis, A Demonstration of Normal and Pathological (Wear), 333.
 Nervous Diseases, A Discussion of Some Recent Advances in the Commoner (Weisenburg), 41.

Neurologic Diagnosis of Pernicious Anemia, the. With Remarks on Treatment: Early Diagnosis (Daniels), 185.
Non-Fatal Gunshot Injuries of the Skull with Intracranial Retention of the Projectile (Schmidt), 375.

Obituaries—Colorado:

Becker, Henry John, 435.
Bishop, Frank Dewey, 162.
Bruns, Earl H., 161.
Chase, Alpha Manly, 435.
Craig, James Weir, 66.
DeWar, Victor Theodore, 273.
Dymenberg, Noah, 65.
Gillaspie, Carbon, 240.
Harvey, Horace Granville, 195.
Hays, Walter Ennis, 311.
Hills, Willard W., 162.
Keller, Walter Claudius, 65.
Reed, Marvin Warren, 435.
Spitzer, William M., 162.
Walters, B. Frank, 66.
Williams, Harry Lawrence, 162.

Obituaries—Wyoming:

Brownrigg, Albert E., 243.
Hoff, A. F., 525.
Yates, W. W., 36.
Obliterating Appendix as a Cause of Disturbances Connected with Abdominal Nerves and Lymphatics, the (Freeman), 320.
Obstetrics From the Standpoint of the General Practitioner (Knuckey), 338.
Ocular Injuries, On the Management of (Finn-off), 7.
On the Management of Ocular Injuries (Finn-off), 7.
Otolaryngology, Progress in (Levy), 85.
Packard, George B.; Factors Affecting Mortality in Acute Appendicitis, 322.
Packard, Robert G. and Barnard, Hamilton I.; Complications in the Treatment of Congenital Dislocation of the Hip, 248.
Palmer, Frank E.; Pharyngo-Maxillary Abscess, 79.
Paralytic Ideus, Postoperative (Phifer and Rae), 200.
Paranasal Sinus Pathology and Focal Infections (Wherry), 439.
Peirce, F. J. and Prior, F. H.; Medical Treatment of Disease of the Accessory Sinuses, 81.
Pellagra in Colorado (Dennis), 423.
Peritonitis, Pneumoperitoneum in the Treatment of Tuberculous (Gilbert), 296.
Perkins, Earl J.; Potassium Oleate as a Sclerosing Agent for Varicose Veins, 387.
Pharyngo-Maxillary Abscess (Palmer), 79.
Phifer, Fred W. and Rae, Harold B.; Postoperative Paralytic Ideus, 200.
Philpott, O. S.; The Association of Eczema With Alteration in Gastric Secretions, 295.
Physician Looks at Himself, the (Frank), 262.
Piness, George, and Miller, Hyman; The Food Factor in Allergy, 405.
Placentae, Ablatio; A Report of Four Cases: Case Report (Whiteley and Dorsey), 231.
Pneumonia in Childhood (Abt), 173.
Pneumoperitoneum in the Treatment of Tuberculous Peritonitis (Gilbert), 296.
Poisoning, Methylene Blue in Carbon Monoxide: Case Report (Brown), 302.
Porter, R. B.; Extensive Injury By a Mushroom Bullet: Case Report, 354.
Postoperative Paralytic Ideus (Phifer and Rae), 200.
Potassium Oleate as a Sclerosing Agent for Varicose Veins (Perkins), 387.
Pregnancy, Menstrual, and Estrus Cycles, the Unanimity of the (Burns), 381.
Presence of Fluorine in the Water Supply of Colorado and Its Relation to the Occurrence of Mottled Enamel, the (Boissevain), 142.
Presidential Address (Webb), 370.
Prior, F. H. and Peirce, F. J.; Medical Treatment of Disease of the Accessory Sinuses, 81.
Privilege of Death, the (Wanner), 71.
Proceedings of the Sixty-third Annual Session, Colorado State Medical Society, 464.
Proceedings of the Special Meeting, House of Delegates of the Colorado State Medical Society, 156.
Progress in Otolaryngology (Levy), 85.
Public Health Notes, 20, 57, 98, 149, 188, 233, 267, 303, 355, 390, 427, 459.
Radiation Therapy of Tumors, The General Principles of (Wasson), 257.

Radiology to Other Fields of Medicine, The Relation of (Skinner), 179.
Rae, Harold B. and Phifer, Fred W.; Postoperative Paralytic Ideus, 200.
Relation of Radiology to Other Fields of Medicine, the (Skinner), 179.
Relation of Surgeon and Insurance Carrier Under Workmen's Compensation Act (Waggener), 218.
Rest and Shot Bags in Pulmonary Tuberculosis (Webb), 183.
Retroperitoneal Lipoma: Case Report (Lee), 388.
Sams, Louis V.; Surgery of the Upper Abdomen, 287.
Schilling Blood Count, the (Finney and Dunlop), 212.
Schmidt, Ernst A.; Non-Fatal Gunshot Injuries of the Skull with Intracranial Retention of the Projectile, 375.
Schroeder, Robert H.; Didelphys Uterus: Case Report, 301.
Sears, Thad P.; The Mechanism of Edema, 50.

Secretarial Notes and Comment:

Advisory Committee Reports on Child Research Council, 193.
Annual Dues Are Becoming Delinquent, 102.
Basic Science—Heart of Our Legislative Program, 103.
Better Relations With the University Hospitals, 25.
Board of Medical Examiners, 360.
Colorado May Well Be Proud, 271.
Committee Activities, 432.
Committee on Cancer Education, 433.
Conference of County Presidents and Secretaries, the, 63.
General Program, 309.
General Scientific Exhibits, 310, 359.
Hotel Rates, 359.
Immediate Problem in Medical Legislation, the, 102.
Innovations for Our State Meeting, 238.
Malpractice Insurance Premiums Increased, 271.
Medical Legislation, 62.
Medical Organization Faces Its Supreme Test, 26.
Month's Committee Work, the, 521.
New Admission System for Colorado General, 432.
New Quarters for The State Society, 26.
New State Society Cancer Committee, 308.
New Work for the Nine Councillors, 432.
Our Advertisers Are Saving You Money, 311.
Principles of the Basic Science Law, the, 105.
Roentgenological Exhibits, 310.
School of Medicine Annual Clinics, 103.
Should This Doctor Receive a Prize?, 63.
Sixty-Third Annual Session of the Colorado State Medical Society, 309.
Special Exhibit—Clinic, 359.
Special Meeting, House of Delegates of the Colorado State Medical Society, 156.
State Meeting at Colorado Springs, the, 359.
State Meeting Program is Nearing Completion, the, 193.
State Society Committee Acts on Sewage Question, 521.
Statutory Regulation of Infant Adoption, 395.
Time Limit Extended for Dues Payments, 161.
University Hospital Relations—More Actions by Your Committee, 63.
Why Colorado Should Have a Basic Science Law, 104.
Sethman, Harvey T.; Economic Do's and Dont's for The Medical Society, 135.
Severe Infections of the Hand: Early Diagnosis (Connell), 17.
Sevier, Charles E. and Thomas, Atha; Corrective Treatment of Compression Fractures of the Spine, 252.
Sewage Problem, The Denver (Hall), 456.
Shall We Legislate the Medical School and Its Hospitals into Oblivion (Tepley)?, 139.
Shivers, M. O.; Means and Methods of Goiter Prophylaxis, 345.
Sidwell, C. E.; Iritis; Its Cause, Management, and Treatment, 4.
Sinus Disease, Acute and Chronic. More About That Bane of the Rhinologist's Existence (Carroll), 228.
Sinuses, Lipiodol Injection of Nasal (Earnest), 77.
Sinuses, Medical Treatment of Disease of the Accessory (Peirce and Prior), 81.
Sinus Pathology and Focal Infections, Paranasal (Wherry), 439.
Skinner, E. H.; The Relation of Radiology to Other Fields of Medicine, 179.
Smith, C. Richard; Carcinoma of the Appendix: Case Report, 351.

Societies, Medical—Colorado:

Arkansas Valley Medical Association, 360.
Boulder County Medical Society, 28, 110, 194, 239, 311, 433.
Colorado Ophthalmological Society, 111, 162, 239, 272, 522.
Colorado Society of Clinical Pathologists, 110, 522.
Colorado State Medical Society, 30, 68, 112, 197, 313, 362, 397, 437.
Crowley County Medical Society, 28, 64, 163, 239, 434.
Delta County Medical Society, 64.
Denver County Medical Society, 65, 110, 163, 194, 239, 396, 434, 522.
El Paso County Medical Society, 65, 163, 195, 240, 434, 522.
Fremont County Medical Society, 28, 65, 110, 163, 195, 240.
Kit Carson County Medical Society, 28.
Larimer County Medical Society, 28, 110, 163, 195, 240, 311, 360, 434.
Las Animas County Medical Society, 65.
Mesa County Medical Society, 110, 163, 195, 434, 522.
Northeast Colorado Medical Society, 65, 110, 434.
Northwestern Colorado Medical Society, 110, 311, 360.
Otero County Medical Society, 28, 434.
Pueblo County Medical Society, 28, 65, 110, 164, 195, 240, 434, 522.
San Luis Valley Medical Society, 435.
Weld County Medical Society, 28, 65, 110, 311, 435.
Woman's Auxiliary, 29, 66, 111, 164, 195, 240, 274, 311, 361, 396, 435.

Societies, Medical—Wyoming:

Lander County Medical Society, 118, 199.
Laramie County Medical Society, 118, 199.
Northwestern Wyoming Medical Society, 36, 118.
Sheridan County Medical Society, 70, 199, 244, 276.
Southwestern Wyoming Medical Society, 399.
Some Clinical Aspects of Tumors of the Breast (Mead), 289.
Spastic Colitis (Hick), 209.
Spine, Corrective Treatment of Compression Fractures of the (Thomas and Sevier), 252.
Spine, Mild Compression Fractures of the: Early Diagnosis (Barnard), 265.
Surgery of the Upper Abdomen (Sams), 287.
Surgical Indications in Head Injuries (Keegan), 447.
Tepley, Leo V.; Shall We Legislate the Medical School and Its Hospitals into Oblivion?, 139.
Thomas, Atha and Sevier, Charles E.; Corrective Treatment of Compression Fractures of the Spine, 252.
Thoracic Aorta and Saccular Aneurysm of Abdominal Aorta, Coincident Dissecting Aneurysm of: Case Report (Kampmeier and White), 299.

Thyroid Gland From the Medical and Surgical Standpoint, the (Bunten), 114.
Transfusion of Blood in Tuberculosis. A Report of 50 cases (Bundsen), 385.
Transitory Vestibular and Auditory Disturbances Following Mumps: Case Report (Frumess), 56.
Treatment of Burns, the (Madler), 46.
Tuberculous Peritonitis, Pneumoperitoneum in the Treatment of (Gilbert), 296.
Tuberculosis, Rest and Shot Bags in Pulmonary (Webb), 183.
Tuberculosis, Transfusion of Blood in. A Report of 50 cases (Bundsen), 385.
Tumors of the Breast, Some Clinical Aspects of (Mead), 289.
Tumors, The General Principles of Radiation Therapy of (Wasson), 257.
Unanimity of the Pregnancy, Menstrual, and Estrus Cycles, the (Burns), 381.
Utah and Its Relation to the Medical Profession, The Industrial Commission of (Brown), 33.
Uterine Fibroid, the "Birth" of a Submucous: Case Report (Beebe), 186.
Uterine Hemorrhage (Halley and Whiteley), 340.
Uterus, Didelphys: Case Report (Schroeder), 391.
Van Meter, Virginia C.; Local Anesthesia in Thyroid Surgery, 344.
Varicose Veins, Potassium Oleate as a Sclerosing Agent for (Perkins), 387.
Waggener, W. R.; Relation of Surgeon and Insurance Carrier Under Workmen's Compensation Act, 218.
Wanner, Jay G.; The Privilege of Death, 71.
Washburn, Alfred H.; Blood Pictures in Average Healthy Infants During the First Six Months, 413.
Wasson, W. Walter; The General Principles of Radiation Therapy of Tumors, 257.
Wear, W. W.; A Demonstration of Normal and Pathological Nephroposis, 333.
Webb, Gerald B.; Presidential Address, 370.
Webb, Gerald B.; Rest and Shot Bags in Pulmonary Tuberculosis, 183.
Weisenburg, Thodore H.; A Discussion of Some Recent Advances in the Commoner Nervous Diseases, 41.
Wherry, W. P. Paranasal Sinus Pathology and Focal Infections, 439.
White, J. W. and Kampmeier, R. H.; Coincident Dissecting Aneurysm of Thoracic Aorta and Saccular Aneurysm of Abdominal Aorta: Case Report, 299.
Whiteley, P. W. and Dorsey, C. W.; Ablatio Placentae; A Report of Four Cases: Case Report, 231.
Whiteley, Philip W. and Halley, William H.; Uterine Hemorrhage, 340.
Workmen's Compensation Act, Relation of Surgeon and Insurance Carrier Under (Waggener), 218.
Wyoming, Anent Medical Care of the Indigent in (Beck), 524.

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C. F. Kemper, M.D., *Chairman*
C. S. Bluemel, M.D.
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EDITORIAL NOTES AND COMMENT

Christmas and Medical Costs

CHRISTMAS has come and gone. It is too late to join in the eloquent chorus regarding it. For that matter it was too late to speak of Christmas hundreds of years ago. Who could say anything new about Christmas? Only the genius of Dickens could make an entrance with another carol suited to the season. But some lesson, applicable to our present problems, might be drawn from the spirit of Christmas. Few social problems would fail to yield their own solutions if the spirit of Christmas were made to prevail from day to day.

Christmas defies the engineer and the facile salesman. It casts "efficiency" aside, and purchases are generally too small to draw the interest of those trained in urgent exhortation. Whoever walked with a candy cane? or ate one? Yet it dangles in gay colors from a limb of every Christmas tree. The dolls that sleep and awaken will soon lose their eyes. Something will happen to the spring of the railroad train, and tomorrow it will refuse to run. On Christmas the cruel mechanism of the world runs down and sentiment transcends judgment. Might it not be well for the underlying spirit of Christmas to last longer than a day?

In our present profession there was once a year-long attachment between physician and patient. That was before medicine grew to its present proportions and before we ruined it by excessive indulgence in all its possibilities. Now these patients, once wholly ours, are but lame marchers in a pro-

cession from one laboratory to another—the x-ray, the blood chemistry, the microscopic examination of excised tissue, the kidney function test, and many others. There are places where all these things are done with dreary routine. The labor and capital involved are considerable. So must be the cost. Is there any wonder someone proposes to construct a machine which will do all these things quickly, accurately, and cheaply on a mass production basis and thereby destroy what little remains of the sentimental relation between the doctor and his patient?

Charles Dudley Warner told a story of a woman of sober mind and sedate manners. Her plain attire conformed to the simplicity of her life and suggested a larger interest in others than in herself. One day she was strangely enticed into buying a red hat. Off her head that hat had an unexplained appeal. In its proper place it was harshly out of harmony with every other item of her apparel. Now, one by one, she laid aside her old garments for others more compatible with her head-dress until, at length, she was gaudily attired. Her thoughts must now take a new direction. She was no longer a simply clad seeker of sorrows to be relieved. Her place was within the whirl of social indulgences; in the midst of fluttering ribbons, pretty faces, and inconsequential chatter.

Is this story a mere exploit of imagination or is it a leaf from life? Within the memory of even middle aged men, medicine may be said to have received a new head-dress and a constantly accumulating wardrobe. In all

its gaudy and complicated character, it has been pressed upon our patients more to their cost than to their profit. Now they demand it and, failing in their demands, feel neglected. What then shall we sacrifice upon the altar of progress? Shall it be the spirit of Christmas—the life of sentimentality or the efficiency of the machine? Certainly the efficiency engineers did not prevent the present economic collapse. They might be fairly charged with being responsible for it. There are now loud appeals for that altruism which “efficiency” has all but destroyed.

C. S. E.



Committee on the Costs of Medical Care—Final Report

THE final report of this committee was released on November 30, 1932, by its chairman, Dr. Ray Lyman Wilbur. This event marks the completion of its five year study. An abstract and analysis of the report appears in the December 3 issue of the Journal of the American Medical Association. Since the complete report covers some 130 pages of printed matter, physicians should at least give attention to the abridgement.

It will be recalled that the Committee was organized in 1927 to assist our profession in delivering adequate medical care to all people. Of the fifty members, half were physicians; the other committeemen consisted of professors, deans, hospital officials, and business men. The recommendations deal with group practice, public health service extension, social insurance, and the formation of official agencies to study and evaluate medical services.

The director of the committee, Harry H. Moore, Ph.D., and lay members have revealed personal favor for insurance and governmental schemes. This influence, in our opinion, is predominating in the report and has augmented a trend which is a product of the depression. We feel that much of this smoldering unrest would pass away when the prevailing clouds are lifted. The American Medical Association views this expedition of nearly a million dollars with “amusement and regret.”

The majority report recommends that medical practice be largely supplied by groups of physicians with the aid of hospitals. It endorses the care of employees and their families by corporations and the expansion of student health services at universities to include faculty and townspeople. It advocates extension of public health services to more and more people. Though the majority report would place medical costs on an insurance basis or taxation, or both, it would not abolish private practice for those who prefer it.

The keynote of the minority report is the plea for restoration of the dignity of the general practitioner. Experience indicates that he can efficiently and economically handle 80 per cent of illnesses. For financing the 20 per cent of more serious conditions occurring among the indigent, the majority report would establish insurance or taxation—a revolutionary procedure. The minority claims this would incite demoralization of our profession through solicitation of patients, commercial competition, inferior practice, and loss of the personal relation of physician and patient. Control of practice would be taken from physicians and the profession exploited. Thus the minority holds high our ideals and the foundation upon which the profession stands. It is willing to try any plan which does not rock these fundamentals or remove from our hands that control which has been earned through generations of altruistic service.

Obviously, the minority report represents the voice of the medical profession; the majority has expressed the vision of servants of public health and of laymen who would disrupt the foundations of scientific medical service. Which shall it be? The question is just as poignant now as it was before these five years of arduous study and the expenditure of nearly a million dollars by the Committee. The American Medical Association, sincerely believing it is better for the American people to choose their own doctors for the majority of illnesses, urges our support of the minority report.

Knowing that there now exist immense insurance companies offering financial se-

curity in the event of illness, accident, or major operation, we wonder why such protection might not be made available to the majority of people.

Patients would then choose their physicians and hospitals; the indispensable doctor-patient relationship would be unimpaired; the progress of medical science would not be impeded through lack of incentive and the stimulus of fair competition. It should not require five years of time, immense sums of money, and the brains of fifty accomplished men to consider expanding the scope of existing agencies in America. We wonder if this report will not do more harm than good, disrupt the faith of many doctors, and sow the seeds of radical changes which would later be regretted.

Further consideration of the Committee's report under Secretarial Notes and Comment appears further on in this number of Colorado Medicine. You are urged to give it special attention.



Medical Societies Must Control Medical Service

DR. E. H. CARY, president of the American Medical Association, gave an important address before the state medical society secretaries and journal editors at their annual conference in Chicago last November. His message was constituted of the substance prevailing the entire program—a constructive attitude of the profession toward the pressing demand for adequate medical care commensurate with the financial status of the underprivileged.

All manner of schemes have been promulgated; they vary from corporate to national enterprises; many place medical affairs under lay control and exploit the physician. The general idea is that of a budgeting of medical needs and a per capita distribution of the financial stress. Dr. Cary insists that it remains for the county medical societies to propound workable policies, and their members must be sufficiently unified to put them into practice. This is the only means of preventing the subservience of medical practice to extraneous control with which scientific medicine is absolutely incompat-

ible. The failure, in many instances, of the development of constructive policies in state and county societies has been due to lack of effective leadership. Thus lay or government plans are allowed inception or given impetus. Our attitude should be positive, not passive.

The medical profession has opposed the present government hospitalization of veterans for disabilities of nonservice origin, and of veterans who are able to utilize local physicians and hospitals. The Commander of the Legion invited the Committee on Legislative Activities of the American Medical Association to attend the convention at Portland. Though every courtesy was extended to the Committee and opportunity given it to voice the attitude of the medical profession, we question whether government hospital construction will cease and the unwarranted dole of medical service become slackened. If the future attitude of the government remains unaltered, it is obvious how it may affect our professional welfare. The lavish expenditures upon the veterans may indicate the potential possibilities of expansion into medical bureaucracy.

The Judicial Council of the American Medical Association, in giving a decision on the evils of certain forms of contract practice, has defined the altruistic attitude of organized medicine: "A fundamental of medical ethics is that anything which in effect is opposed to the ultimate good of the people at large is against sound public policy and therefore unethical." Dr. Cary believes that upon the positive action of state and county medical societies depends continued progress in the art and science of medicine.



Spread the Word

ABOUT the new address of the Colorado State Medical Society and its Journal, Colorado Medicine. We have obtained improved quarters at less rental, better to serve every member. The new address is 537 Republic Building, Denver. The telephone number remains unchanged, KEystone 0870. What can WE do for YOU?

IRITIS; ITS CAUSE, MANAGEMENT, AND TREATMENT*

C. E. SIDWELL, M.D.
LONGMONT

The history of iritis dates back to the time of Hippocrates. He described what, no doubt, were the sequelae of iritis, according to a comprehensive review of the history of the literature of chronic uveitis given by Edward Jackson. It seems the term cyclitis first came into use about 1846 when Bowman described the ciliary body, but not until 1902 did the term uveitis, as we use it today indicating inflammation of any or all parts of the uveal tract, become general when a symposium on uveitis was presented before the Section on Ophthalmology of the American Medical Association².

These papers brought out the fact that lesions in different parts of the uvea arose from the same causes and emphasized the importance of giving them a common name, uveitis. Jackson stated that this literature of the last thirty years pertaining to the etiology of uveitis outweighs in value that of all preceding centuries. A study of our own individual cases substantiates the conclusion, arrived at in ophthalmic literature, that iritis is always accompanied by at least a mild cyclitis. Considering the embryonic origin and anatomic continuity of iris and ciliary body and the fact that their blood supply is so closely associated, it is not surprising that the component parts of the uveal tract are so often simultaneously affected by bacteria and their toxins.

A correct diagnosis is of great importance in treating these cases intelligently. Dr. Ida C. Mann³, of London, says, "It may appear a truism to state that the first and most important step in treatment is accurate diagnosis, but nevertheless in dealing with the question of acute iritis, this point must be particularly stressed, since in this case a mistaken diagnosis may lead to one of the gravest possible errors of treatment. Patients with either acute iritis or glaucoma complain in the first instance of redness and pain in the eye accompanied by disturbance

of vision. It is of paramount importance to distinguish between the two diseases since their treatment is diametrically opposed, and in either case injudicious treatment may be fraught with the most serious consequences." Thomas D. Allen⁴, of Chicago, states, "The success of the therapeutic attack depends on diagnosis." It might therefore be well to emphasize a few points that should be considered:

1. In iritis the pupil is contracted and acts sluggishly to light and is smaller than in the unaffected eye; whereas in glaucoma it may be semidilated or oval, usually vertically, and is absolutely immobile.

2. In iritis the anterior chamber is either deep or normal, while it is very shallow in glaucoma.

3. The aqueous humor may be cloudy because of exudate, but it is clear in glaucoma. Its clouding may be simulated in glaucoma because of a steamy and stippled cornea.

4. Tension in iritis may be somewhat elevated, but varies; in inflammatory glaucoma, it is always elevated. Tension should be taken at intervals with the tonometer. If an eye is quite hard, it is not difficult to diagnose by palpation.

5. The cornea is clear in iritis except as some exudates can be seen adhering to the posterior surface, providing magnification is used. In glaucoma, the anterior surface is hazy or steamy. After a definite diagnosis is made, the patient must be told that the duration of the tension may be one of weeks or even months.

With regard to the causes of iritis, there has been a diversion of opinion in the past. One school of thought has attributed its etiology in most cases to bacteria and their toxins, and has substantiated its claims with many cases, over a period of time sufficiently long, in the essayist's opinion, to be convincing. It appears readily possible for organisms or their toxins to be transported by the blood stream from a distant focus in teeth, tonsils, or other foci of infection.

*Read before the Sixty-Second Annual Session of the Colorado State Medical Society at Estes Park, Sept. 8, 1932.

Although Pasteur and others had demonstrated the microbic origin of disease in the latter part of the nineteenth century, it is not altogether strange that the non-bacterial causes of uveitis continued to have adherents long after the science of bacteriology was well established. Those who have cast a dissenting vote are in the minority. They have not boldly stated their opinions as against the specific causes of iritis, but there has been a vein of skepticism in their writings, and withal they have not, in fact or theory, advanced arguments that are enlightening or convincing.

E. E. Irons and E. V. L. Brown⁵ of Chicago, collaborating with ophthalmologists, otolaryngologists, internists, dentists, and laboratory experts, made a study of two series of 100 cases each to determine what kinds of infection were present and the probable causes of iritis. The infections found were removed as far as possible, and the effects on the eye were noted. After three to twelve years had elapsed, they presented a summary of the first fifty cases from which they were able to obtain reports with reference to recurrence. In forty-three cases, there were no recurrences of iritis after removal or adequate treatment of infections found and believed to be the cause of iritis. In four others in which there were recurrences, the infections were known not to have been removed. In one of the three remaining cases, an old quiescent pulmonary tuberculosis was the only cause that could be found. In another case, a sinus infection was thought to be the cause, and the case went on to ultimate blindness. The one remaining case gave a local tuberculin reaction, and the cause of iritis was undetermined as a re-study was not allowed. In the study of 100 cases observed and reported in 1916, they determined the causes were syphilitic 23, gonococcal 9, tuberculous 8, dental 18, tonsillar 16, sinus 3, non-venereal genito-urinary 3, other infections 2, combined infections 17, and no cause in 1. In 37 cases, more than one infection was thought to be the cause. Infection of tonsils, sinuses, and teeth, or syphilis and gonorrhea, were found together.

Lerner⁶ of Rochester, N. Y., says cases of questionable or idiopathic iritis may be due to gonococcal infection, as an absence of urethral discharge or shreds cannot exclude gonorrhea. In gonorrheal iritis there is a tendency to recur. He emphasizes the fact that a competent urologist should be consulted.

Von der Heydt, of Chicago, has observed that in the secondary stage of syphilis we may find a bilateral comparatively painless iridocyclitis. He is of the opinion that hereditary syphilitics, in the third generation, the parents having had interstitial keratitis due to inherited syphilis, are subject to mild forms of iridocyclitis because of the taint.

Rosenow and Nickel⁷, of the Mayo foundation, in a large series of cases have been able to isolate the streptococcus from different foci in the human being, where the patient was suffering from iritis or other eye conditions, and produce in animals in 40 to 50 per cent of cases ocular reactions simulating conditions in those acting as hosts to the streptococcus. They have claimed for this streptococcus or its toxins the property of "elective localization" and conclude, "Elective localization of this streptococcus or its toxins has been obtained in a sufficiently high percentage of animals, in a large enough series of cases, by methods sufficiently variable, and with conditions sufficiently like those at hand in patients, to be of significance. The dead streptococcus and filtrates of a culture that manifested elective localizing power also had specific affinity for the eye, causing typical ocular reaction. The most important requirements for casual relationship of this streptococcus to uveitis and other intra-ocular diseases of the eye have been fulfilled."

The treatment of iritis is both local and general. The success of treatment in the majority of cases depends upon the promptness with which it is begun and the thoroughness of its application. The objects of local treatment are:

1. To dilate the pupil and keep it dilated. This avoids complications by preventing

adhesions between iris and lens capsule or will break them up when once formed.

2. To immobilize and put at rest iris and ciliary body, theoretically putting the eye to bed.

3. To relieve pain and congestion.

Atropine is as always the sheet-anchor of treatment. A one per cent solution or salve used every three or four hours is usually effective in producing complete dilatation of the pupil, after which its use at longer intervals is sufficient. When the desired effect is not obtained with the weaker solution, a 2 or 5 per cent solution may be necessary. Cocaine and atropine together have been recommended as more effective, but habit formation and idiosyncrasy for cocaine are not in its favor. If the iris is adherent to the lens capsule, a few granules of powdered atropine will likely give the desired result, making pressure over the lacrimal sac to prevent the possibility of poisoning by a too rapid absorption. Since the conjunctival sac is usually flooded with tears, it is of the utmost importance to blot or wipe them away with absorbent material, otherwise the remedial agent will be diluted and rendered useless. A drop or two of one per cent atropine injected under the conjunctiva once or twice daily adds greatly to the success of treatment. In stubborn cases, several artificial leeches applied to the temple to relieve pain and cause the pupil to yield to atropine where it had previously been rigid. It is well to bear in mind that atropine used over a long period of time may, in some cases, produce a conjunctivitis, masking the symptoms.

The choice of another mydriatic, such as duboisine, or a one-fourth to one-half per cent scopolamine hydrobromide is desirable. Another very effective mydriatic is glaucosan. Two per cent homatropine is safer than atropine for diagnostic purposes in suspected cases of iritis, but in doubtful cases the slit-lamp is of inestimable value in diagnosing iritis.

Heat has a very favorable influence on the inflamed eye and should be moist, applied over a rather large area for fifteen minutes' duration at two-hour intervals. A

drop of ten per cent dionin solution is a safe analgesic and a lymphagogue. It should be used without hesitation and its spectacular effect of local edema obtained. Too frequent use reduces its effect hence it should be used intermittently. Absolute rest in a darkened room during the acute stage of the disease not only makes the patient more comfortable, but shortens the disability and prevents complications. The use of foreign proteins have long been in use in treatment of ocular inflammations. The manner in which it acts is not entirely clear, but its efficacy has been proved to the satisfaction of those who use it properly. Typhoid vaccine, given intravenously every two or three days in proper dosage to produce a reaction, is recommended. A safe way is to begin with thirty million killed typhoid bacteria given intravenously except in children or where the first dose has produced a very severe reaction. Increase this dosage, every second or third day, by the amount of the primary dose. Allen⁸, of Chicago, recommends seventy-five to one hundred and fifty million—enough to produce chills and fever. Diphtheria antitoxin is used, but the danger of anaphylaxis is greater than with typhoid vaccine or milk. Fresh, unpasteurized milk, boiled four minutes, given into the gluteal muscles in 10 c.c. dosage daily is recommended. Autogenous urinary proteose has been recommended by Mills and Martyn, of Los Angeles, for cases of iridocyclitis and other ocular conditions. Whitehead, Dickman, and Darley, of Colorado General Hospital, are of the opinion that urinary proteose has given favorable results in eye conditions and think the results they have seen justify its use. Milk and typhoid vaccine are safer and can be readily controlled.

Salicylates, given to the point of toleration, have a most important place in the treatment of iritis and can also be given intravenously to hasten saturation or to relieve an intolerant stomach. Gifford⁹ recommends one grain for each pound of body weight in cases of average severity. This is especially recommended in iritis following trauma.

When the etiological diagnosis has been made we should proceed without delay with the specific treatment. It is not in the realm of this paper to discuss the treatment of these causes. The local treatment of iritis is the same irrespective of etiology.

A correct diagnosis and guidance in the treatment, by an ophthalmologist, are essential to recovery without permanent final impairment in this often destructive eye disease.

REFERENCES

¹Jackson, Edward: Review of Literature of Chronic Uveitis, American Journal of Ophthalmology, pp. 1203-1207.

²De Schweinitz: Trans. Section on Ophthalmology, American Medical Association, 1902, pp. 158-223.

³Mann, I. C.: The Treatment of Acute Iritis, *Lancet*, 8, 21-1926. p. 399.

⁴Allen, T. D.: General Considerations of Iritis, *Lancet*, Oct. 1, 1931, p. 593.

⁵Irons, E. E., and Brown, E. V. L.: Etiol. of Iritis, Section on Ophthalmology, American Medical Association, 1916 and 1923.

⁶Lerner: Gonorrheal Iritis, New York State Journal of Medicine, Oct. 15, 1928, p. 2025.

⁷Rosenow and Nickel: American Journal of Ophthalmology, January, 1932.

⁸Allen: General Considerations of Iritis, *Lancet*, Oct. 1, 1931, p. 593.

⁹Gifford: Ocular Therapeutics.

¹⁰Mills and Martyn: Urinary Proteose in Ocular Allergy, Section on Ophthalmology, American Medical Association, 1932.

ON THE MANAGEMENT OF OCULAR INJURIES*

WILLIAM C. FINNOFF, M.D.
DENVER

In no part of the body is the proper early management of injuries so essential as it is in the region of the eye. Surgical cleanliness and meticulous replacement of lacerated tissues are of paramount importance to obtain satisfactory cosmetic and functional results. Gentleness in manipulation and needless sacrifice of tissues must always be borne in mind. If one is not equipped or prepared for this delicate type of surgery, it is far better to dress the wound with a sterile dressing and send the patient, as quickly as possible to one who is competent to handle such cases, rather than to mutilate the patient, as is frequently done.

With the steady increase in the number of automobile accidents, facial injuries are becoming much more common. Some of the cases are first seen by physicians who have not had special training in the management of ocular injuries and occasionally more damage is done by injudicious emergency treatment than would have occurred had the patient not been treated. The following is an example of such a case. The victim had been thrown forcibly, face downward, from a rapidly moving vehicle into a stubble patch; the skin of forehead, nose, and cheeks was deeply gouged and the right lower eye lid near the inner canthus was deeply torn.

The wound severed the lower canaliculus and prevented the passage of tears from the conjunctival sac into the nose. If the edges of the wound had been carefully brought into position at the time of the emergency treatment a satisfactory result might have been obtained, but a large cat-gut suture had been buried in the deep tissues without any attempt to align the wound margins. An unsightly infected wound that could not be repaired satisfactorily resulted. This case was made worse by the emergency treatment that had been given and would have fared much better if the wound had not been touched at the time of the accident.

In all injuries in the region of the eyes, the vision should be taken before treatment is instituted and the patient has had an opportunity to think of compensation. A careful history of the circumstances of the accident will often throw valuable light on the gravity of the injury; this is especially true when foreign bodies have entered the eye.

Lacerations of the eye lids should be thoroughly cleansed with some sterile solution and all foreign matter and secretion removed. If necessary, the region may be scrubbed with moistened gauze. A general anesthetic is to be preferred to local injection if pain is severe. After the wound is cleansed, a mild antiseptic should be ap-

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plied and bleeding stopped by gentle pressure and not with ligatures or hemostats.

The margins of the wound must be approximated as nearly as possible to their normal position. The bulbar conjunctiva and the conjunctiva of the cul de sac should first be sutured with fine silk (No. 3 twisted). The tarsal margins are then brought into apposition or slight over-correction by inserting a suture in the margin of the lids between the lashes and the Meibomian glands. The lids should be drawn forward and silk sutures inserted through the conjunctiva and inner portion of the tarsus from the cul de sac below upward to the lid margin. The skin should then be carefully sewed into position. Very fine needles should be used and trauma with forceps reduced to a minimum. In irregular laceration, the margins of the wound should be so placed that the subsequent contraction of scar tissue will tend to elevate the lid margin instead of drawing it downward and away from the eyeball. Careful overlapping of tags of tissue and skin will often help to accomplish this result. Under-correction at the lid margin will result in unsightly notching.

Extensive lacerations of the cheek, if not carefully repaired, may cause a troublesome ectropion of the lower lid through the contraction of scar tissue, and one should always bear this in mind when repairing wounds about the eye. Wounds in the temple and forehead also distort the lids in a similar manner. This possibility should always be borne in mind when repairing wounds in the region of the face. Slight over-correction is always desirable, for under-correction always requires a secondary operation.

Diffuse burns of the face in the region of the eyes always are followed by extensive contractions and troublesome deformities of the eyelids. Every possible attempt should be made to minimize infection and prevent the formation of scar tissue. These cases always require secondary operations, frequently with extensive skin grafting. Various mechanical devices may be used to

protect the cornea until all scar tissue is finally contracted and infection eliminated.

Perforating injuries of the eyeball, whether associated with other injuries about the face or not are always more serious and may require enucleation of the eyeball. Conjunctival flaps drawn over the wound may give satisfactory results. Prolapse of the iris or other ocular structures requires the attention of the ophthalmologist. In all perforating injuries, foreign protein therapy should be instituted. Antitetanic serum prevents tetanus and has a beneficial influence on intra-ocular infection. If there is no danger of tetanus, the intravenous injection of typhoid vaccine or the use of other foreign proteins is indicated. Time will not permit a further discussion of this phase of treatment.

When the eyeball is hopelessly perforated, it should be removed as carefully as possible to prevent the formation of scar tissue and contraction of the socket. A complication of this character precludes the wearing of an artificial eye, and produces an unsightly deformity that requires an extensive secondary operation. However, an enucleation should never be done, even if the globe seems hopelessly damaged, without the advice of an ophthalmologist.

It is not the intent of this paper to discuss the management of minor ocular injuries, but rather of injuries more extensive in character that include or may affect the eye.

Never under any circumstances should a plastic operation be attempted around the eye in the presence of infection. All signs of inflammation should be absent and the scars fully developed before repair is attempted. In extensive wounds about the face with deformity of the eyelids, the general surgeon should complete his work before an attempt at correction is made. If this precaution is not insisted upon, a satisfactory correction of a lid deformity may be attained and subsequently ruined by the contraction of scar tissue from later operations.

The above has referred only to emergency treatment shortly after the accident—

a phase that may concern a general practitioner as well as the general surgeon. The following refers only to the management of deformities that have resulted from injuries that have occurred prior to the time that the case comes under observation.

Infected wounds usually produce great deformity and if improperly treated result in either inturning or eversion of the eyelids due to contraction of scar tissue. Usually the scar is not confined to the eyelid but extends to adjacent parts of the face, and for this reason such patients often consult a general surgeon for treatment. He in many instances refers the case to the ophthalmologist with the recommendation that he repair the ocular deformity before work is attempted on the face. This is to be deprecated, because without exception all facial deformity should be satisfactorily repaired before any work is attempted on the eye. This point cannot be over emphasized. The reason for this is that following operations on the face there is always a varying amount of contraction from scar tissue and the possibility of secondary displacement of the eyelids. A successful blepharoplasty may be ruined by a subsequent operation on the face.

In correcting injuries of long standing, there are several principles to be followed. The first and most important is never to sacrifice tissue unnecessarily. Second, always aim at a slight over-correction and never be contented with an under-correction. Third, never operate until all signs of infection have subsided. And fourth, give sufficient time for full contraction of scar tissue to occur.

A thorough study of the case should be made on several occasions before an operation is attempted, and the technic should be carefully planned before the operation is undertaken.

When possible, use epidermal skin grafts instead of full thickness or pedicle grafts. The latter always involves additional scarring which is undesirable about the face. For restoration of the eye socket, epithelial inlays are most satisfactory. This is best accomplished by obtaining a cast of the cavity with dental modelling compound and

by covering the mold with an epithelial graft, serous surface outward, and burying it into the cavity after all bleeding has subsided. This method was first proposed by Esser and is one of the greatest recent advances that has been made in plastic surgery about the eye.

In a discussion of this character, it is only possible to emphasize a few important facts. My object in presenting this paper has been to stress the importance of bearing in mind the disastrous deformities of the eyes that may occur from hasty and injudicious surgery about the face following injuries, and the importance of delaying plastic surgery about the eye until all other surgery of the face has been completed. One hardly needs to emphasize the fact that surgery of this character should not be undertaken by the novice.

ABSTRACT OF DISCUSSION

William C. Finnoff, M.D., Denver: The work of Brown and Irons is one of the best and most conclusive studies of the etiology of iritis that has been made. Dr. Sidwell emphasized that foreign protein is one of the most valuable methods of treatment. Those types that are associated with pain and edema benefit most from such treatment.

In recurrent iritis, the primary focus might be removed at the time of the first attack, after the eye itself has become a focus of infection, and recurrent attacks of iritis are then due to further activity in the eye itself and not to a new focus.

Dr. Sidwell asked me also to mention the frequency with which tuberculosis is a cause of iritis. I think that it is rarely ever the cause of acute iritis, but in about 10 per cent of the cases of chronic iritis, tuberculosis is the cause.

Melville Black, M.D., Denver: If iritis is neglected it results in extensive posterior synechiae, which are sometimes very difficult to break loose. A method which has proved very satisfactory in my hands, is to take one drop of a 1 per cent solution of atropine, four drops of adrenalin, and five drops of normal salt solution, and inject this with a fine hypodermic needle under the conjunctiva around the cornea so as to distribute the injections evenly. This will exert a traction upon the pupil which, in my opinion, is as great as can be exerted. I have broken adhesions in this way that I feel never could have been broken in any other way. If the adhesions cannot be broken it is best to do an iridectomy, so as to assure free communication of the fluids behind and in front of the iris.

I should like to emphasize what Dr. Finnoff has said with regard to proper attention to alignment of the lid margins where the lid is split. It seems to be the natural tendency for the inexperienced to begin to bring the parts together at the other end and wind up with the lid margin. The procedure should be just the reverse. Begin at the lid margin and work toward the opposite end. Otherwise one edge of the lid margin will be a

little higher than the other, and this deformity is permanent after the healing takes place. Unnecessary suturing of eyelids is meddlesome surgery. It is surprising what can be done in some of these cases, where the lid margin is not split, by the use of adhesive plaster and gauze, and attention to putting the torn skin into place. Little scarring and no stitch-holes are the results.

Frank Carroll, M.D., Fort Collins: I want to bring up the point that Dr. Black just spoke of, the use of adrenalin in iritis. Frequently a small pledget of cotton saturated with adrenalin and placed under the upper lid will answer when it

is not convenient to have the mixture of adrenalin and atropine, sterile. The application of this adrenalin under the upper lid will frequently produce a nice dilation.

Dr. Sidwell (Closing): Dr. Finnoff, in what percentage of eye injuries do you use a general anesthetic?

Dr. Finnoff (Closing): If one injects large quantities of a local anesthetic into severely traumatized tissue, the resistance against infection is lowered. I think it is better to use a general anesthetic than to fill traumatized tissue with fluid.

THE CLINICAL CARE OF CORONARY DISEASE*

L. W. BORTREE, M.D.

COLORADO SPRINGS

During recent years there has been a marked increase in the frequency of coronary disease, and it is highly probable that this is an actual increase rather than an apparent one due to improved diagnosis. Today more people are reaching the age of arterial degeneration than a few generations ago. In addition, the complexity of modern life has added stress and strain in increasing proportions, thus accentuating one of the important factors in the causation of this disease. It, therefore, behooves us as clinicians to endeavor to formulate a plan of treatment for this condition which will afford our patients the maximum of safety and comfort.

To be sure, present diagnostic standards are not sufficiently exact to permit a diagnosis of coronary disease in its earlier stages. Only too often it is thrombosis that first attracts our attention to the presence of a lesion in the coronary arteries. There are at present three types of coronary disease recognizable. First, sudden coronary occlusion, dramatic in its onset and calamitous in its results. Second, gradual but extensive occlusion resulting in a non-valvular cardiac hypertrophy with eventual myocardial failure. Third, a localized type which, when it involves conduction paths, may become manifest as one of the forms of heart block or delayed conduction. Other types of the disease may occur but at present are rarely diagnosed.

Since sudden occlusion is the type most

commonly recognized and probably the most important from the viewpoint of disability, our main concern is with this form. The treatment of the other forms is similar to the regime advised for the stage of convalescence of the acute type, and therefore the three will be discussed as one.

When called to a case of acute coronary obstruction, we customarily find a patient of middle age or beyond, in a state of shock and apparently in the most agonizing pain. The latter may be in the customary precordial location with radiation to the arms, shoulders, or neck, or it may be purely epigastric. The latter type presents a difficult problem in diagnosis that does not permit extended investigation before starting therapy. When once assured of the diagnosis of an occlusion, our first aim should be the relief of pain, since that is the presenting symptom. If the patient has had a history of preceding angina pectoris, one is tempted to resort to nitrites for relief, although the patient will usually state this pain is different from his former anginal pain. Such a course is not advisable, since nitrites do no good and may possibly increase the lesion due to their slowing the coronary circulation by further lowering the already reduced blood pressure. For the relief of the pain, nothing is of avail save morphine, and the doses that are needed are usually large. Since we all hesitate to overwhelm the system with such a drug, it is advisable to use it in one-quarter grain doses repeated every twenty to thirty minutes until relief is secured. Occasionally one is forced to use nearly two grains to achieve the desired re-

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sult. Following this initial period of narcosis, it is essential that morphine be repeated sufficiently frequently to give rest and relief of pain for the first one or two days of the illness.

Bearing in mind the pathological lesion present—a total loss of blood supply to an area of the heart with possible subsequent necrosis—the imperative need of complete rest is evident. At the onset, this is secured by the effect of the opiate. From the first, the attendants must be warned not to allow the patient to use his voluntary muscles more than is absolutely necessary. All turning and lifting is to be done by others. Visitors and excitement are taboo. An extensive physical examination may exhaust the patient's limited reserve beyond the safety limit. Hence the physician had better restrain his medical curiosity, trying to aid the patient and not to make an exhaustive and exhausting diagnosis. As yet we have no diagnostic means which will inform us as to the extent or intensity of myocardial damage. It is, therefore, safer to assume an extensive lesion and be overcareful, rather than to err on the side of optimism, and, a few days later, suffer the calamity of a cardiac rupture following slight exertion.

Almost equal to the need for relief of pain is the demand to lessen the shock that is in evidence from the first. External heat to the body will aid in this regard. Following the administration of morphine, it is customary to see some improvement in the heart action, and it is well to await this effect before restoring to stimulation. Should the pulse become weak and irregular, the blood pressure fall below 100 systolic, and the skin and lips turn ashen or cyanotic, it is permissible to use caffein sodium benzoate in two to five grain doses at intervals of two to six hours. Larger doses may further reduce the coronary circulation. Should cyanosis be a marked factor, the use of one of the newer forms of oxygen tent will often afford relief. Adrenalin is absolutely contraindicated. Strychnine is futile.

In the hands of the writer the best medium for combating the shock of a coronary thrombosis is the use of 50 per cent glu-

cose solution intravenously in 20 to 40 c. c. doses. During the first few days following the onset, it is well to use this twice or three times in twenty-four hours. Glucose not only aids in reducing shock, but increases diuresis and also provides extra nutriment to the heart muscle during the period following the initial ischemia. In certain instances its use has apparently revived patients almost moribund. Large quantities of solution by vein may overtax the already crippled myocardium, but normal saline solution by rectum will provide the fluids so needed by the tissues. Liquids should not be pushed by mouth until nausea or vomiting have ceased. It is better that the stomach be kept empty until the emergency is passed.

The use of digitalis is fraught with considerable danger in this condition, and its early routine administration is to be condemned. It is, however, of value when evidence of decompensation occurs, but it must be given cautiously and not pushed to the physiological limit. It is better to cease the administration prior to obtaining full digitalis effect. A moderate lowering of cardiac activity is desirable at the outset until the heart muscle has in part regained its tone.

During the first forty-eight hours, food should not be given, and liquids only if vomiting has ceased and they are well retained. The bowels may not move, due to the morphine, and no attempt should be made to make them at first, unless distention is marked, then an enema is permissible. No laxatives should be allowed, but the bowels emptied daily by the use of an enema after the first few days.

Following a coronary thrombosis, the presence of rales in the lungs is the rule, probably due to interference with the pulmonary circulation. For the same reason, it is wise to attempt to avoid further pulmonary stagnation by change of position of the patient, providing this is accomplished at no expense to the patient's energy. If basal rales tend to persist and breath sounds become feeble, the administration of carbon dioxide-oxygen up to the point of slight hyperpnea two to four times in twenty-four

hours may aid in aeration of the lungs and in prevention of pulmonic complications.

A slight but transient rise in temperature customarily follows thrombosis. Coincident with this occurs a leucocytosis. In uncomplicated cases, this fever subsides in three to five days and the leucocytosis a few days later. Until both of these findings have reverted to normal, it is dangerous to allow any relaxation of the strict regime above outlined. They indicate that the process is still active and the critical period not yet passed. However, both these findings return to normal limits much sooner than the repair process is completed in the damaged muscle. It is advisable to continue the bed regime until the sedimentation rate of the blood has returned to normal limits. This requires a much longer period than for the white count and temperature to become normal, and probably represents more accurately the time needed to repair the damaged cardiac muscle. It is a prognostic criterion which should be more extensively used in this condition than it has been in the past. The exact type of sedimentation test used makes less difference than the repeated determination of the rate at intervals of five to seven days. The average case of moderate severity needs bed rest for six to eight weeks before exercise can safely be resumed.

Following the time when morphine is needed to control the pain, there is a second period when the nervous tension of the patient becomes a decided factor in the case. Should this be allowed to continue over any period of time, it is undoubtedly prejudicial in its effect. Some form of sedative is therefore required for the average patient. Chloral hydrate and bromides have been the usual forms given. The author's personal preference is for some of the barbituric acid preparations, if well borne. These should be given in sufficient doses to keep the patient at ease and quiet for several weeks. Experimental evidence indicates that theobromine and theophyllin promote coronary circulation and possibly aid in establishing collateral supplies for some of the damaged area. It is desirable to use these,

if necessary in combination with the sedative, for whatever benefit may be derived from their use. The writer has felt that he has had some definite aid from a mixture of one-half grain pheno-barbital and five grains theobromine given two to three times in the twenty-four hours. The writer has had no experience with the pancreatic extract recently introduced as an antagonist to the suprarenal secretion. Its value would probably be but slight.

During this period of complete physical inactivity, the bodily musculature will have become extremely flabby and the patient weak to the point of exhaustion. Before the resumption of any form of exercise, it is well to initiate a period of massage to help restore muscle tone and to promote circulation. When, in the opinion of the physician, the time has come for the resumption of muscular activity, the start must be made with extreme caution, and only under supervision. The first form of exercise allowable is to sit up in bed with a back rest for a short period, with gradual increase until it can be done without symptoms for an hour or more twice a day. Following this the feet should be allowed to hang over the side of the bed for a period before attempting to place the patient in a chair. The next step is the placing the chair at gradually increasing distances from the bed and allowing the patient to take the few steps to it with assistance. All this should be accomplished under the supervision of a nurse to watch for unusual response of the heart to the exercise.

The purpose of this gradual assumption of activities is twofold. First, it allows the weakened musculature, both cardiac and skeletal, time to re-acustom itself to activity and to regain as much as possible of its lost power. In the second place, it affords the medical advisor information as to the available reserve of the patient. In observing the progress under graduated exercise, the appearance of tachycardia, dyspnea, irregularity, pain, pallor, or cyanosis should be a warning that the cardiac reserve is being overtaxed and that a reduction is imperative. Such a regime is of value to the

patient in that it aids his morale to realize that he is making progress toward a renewed activity in life. Then, too, if observant and well advised, he will learn of his own limitations and danger signs, and thus enhance his safety.

The fact that coronary thrombosis is occasionally by the profession, and commonly by the laity, termed acute indigestion, is possibly of more than accidental import. The extreme frequency with which attacks of thrombosis occur during or immediately following a heavy meal would make the clinician think there might be some causal relation between the two events. Pressure of a full stomach through the diaphragm will definitely embarrass cardiac action in a sensitive organ. It has been shown that cold applied to the heart will slow coronary circulation, and it is possible that the ingestion of large quantities of cold liquid might have similar effect. Reflex action through the splanchnic plexus can profoundly alter cardiac action. Taking all these factors into consideration, it is easy to see that the problem of diet and digestion is a major element in the care of the coronary patient.

Since the majority of coronary patients have reached or passed middle life, it has seemed the part of wisdom to the author to avoid prescribing in detail radical changes in diet. The average person of middle age is perfectly aware that certain articles of food cause him gastric distress. If the nature of the difficulty is explained to him and he is urged to take only such articles of food as he knows will cause him no discomfort, he will ordinarily pick out a fairly reasonable diet. He should be advised to restrict the intake to a smaller quantity at a time than is customarily taken to avoid overloading the stomach. Four or five small meals are better tolerated than three large ones. Following each meal, there should ensue a period of complete rest in bed for an hour or more to aid digestion. If this regime is followed and no exercise taken soon after eating, there should be no marked difficulty from this source in uncomplicated cases.

The marked susceptibility of diabetic pa-

tients to arteriosclerotic disease extends also to the coronary arteries. Should coronary sclerosis develop as a complication of diabetes, it increases greatly the difficulty of managing both the lesions. In such event, the dietary management should take precedent as soon as possible after the first emergency is met. The use of tea, coffee, alcohol, and tobacco should be so adjusted that no irritation results from their use. When a man has been an habitual user of tobacco for a half century and has had no definite harmful results from his indulgence prior to the time of the coronary lesion, it is probable that a complete interdiction of tobacco will produce so much nervous irritation as to offset any possible benefit to be derived from the limitation. A reduction in the quantity used is usually desirable if not unduly resented by the patient. The same holds true for the other stimulants mentioned. In case the myocardial weakness persists, the use of tea and coffee may be a benefit rather than a harm.

When the times comes for the patient to resume a part of his former activities, then the real test of the physician's skill begins. To plot a course for an antiquated ship with a badly crippled engine through the troubled seas of modern life for any extended period of time is a feat for any medical mariner. No heart that has been crippled by a coronary lesion is ever able to fully recover its power. At the present, we have no test that will tell us the amount of reserve remaining. It has to be a matter of trial and error; and may the errors be small and soon discovered. Some general principles may aid in our decisions.

Close observation during the period of graduated exercise should have given us some inkling of the reaction of the heart to strain. It ought to be fairly easy to outline a course of physical activity that the patient can safely follow. The main thing is not to press too rapidly towards the goal. Overdoing harms not only the heart muscle but also the patient's morale. Try to so graduate the physical activity that there can be a steady progress without setbacks to discourage the man or to strain his heart

muscle. A daily rest period of an hour after the noon meal may so recuperate the heart that the balance of the day's work is easily accomplished. If fatigue is a marked symptom, it is well to advise one day a week in bed at complete rest to make up for the activities of the other six days.

A more difficult problem is the sphere of mental and emotional activity. Here we have no measure of intensity in effort as we have in physical labor. It is easy to tell a patient to increase his walk on the level by one-half block a day, but how can we tell him how much thinking is safe? Who can know the mental perturbation of the man as he looks at his ledgers or reads the columns of the financial page? All this is hidden from the eye of his physician, and it is only by close observation and great familiarity with his mental type that the degree of reaction is to be estimated.

In this part of the supervision of a case, the part that education is to pay comes into its own. Each patient should be taught something of the nature of the disease, its causes as far as known, its dangers and how to avoid them. He should be told that his heart is crippled and that it is not able to do the full work that it formerly did, but that it can be strengthened in time so that it can do more than it can safely immediately after the insult. He should be urged to conserve his energy, both muscular and nervous. New and easier ways of performing his duties can possibly be devised, and it is well to have him think over his life to see how he can improve on his former working methods. Psychotherapy at its best can accomplish much here, and the man who has seen the patient through the stress of the initial seizure is the man in whom he has the confidence and to whom he will listen. Help his morale all you can.

In this late stage, drugs may be of great help. Digitalis, in one and one-half grain doses three times daily until full effect, then once a day for several months, may give the heart added force and improve the coronary circulation. This is especially so when heart tones are of poor quality, there is irregularity of action, or the patient shows signs

of cardiac weakness. Other tonics may further assist in the recovery, especially if appetite is sluggish.

It is not to drugs and treatment of the body that we must look for relief in this condition, but to a complete readjustment of the patient's living conditions. Knowing the pathology of coronary thrombosis, we could not hope for complete restoration of function. We must, therefore, wait until the processes of nature have had full time to repair the damaged tissue, then to so teach the patient that he may not over-do and damage the remainder of his already weakened tissues. For the balance of his life, he must live within his reduced income of energy. To achieve this result, education must be our chief reliance.

Summary

1. The first aim of treatment in a case of coronary thrombosis is the relief of the pain. This will probably require repeated doses of one-quarter grain of morphine at twenty to thirty minute intervals. The patient should be kept comfortable after the first narcosis wears off by repeating the opiate as often as needed for the first few days.

2. Shock should be combated by external heat. The morphine will also aid in its relief. Glucose in 50 per cent solution given intravenously in 20 to 40 c. c. doses two to three times a day not only aids in relieving the shock but also furnishes extra nutriment to the heart muscle for the period before collateral blood supply is established. Large doses of fluid by vein may overtax the weak cardiac muscle.

3. Stimulants are to be avoided if possible, but, if the heart is not strengthened by the morphine and its action becomes feeble to the point of danger, the use of small doses of caffeine sodium benzoate is permissible. Adrenalin is dangerous and strychnine useless. An oxygen tent may relieve cyanosis if present.

4. Complete rest of the entire body and mind is essential until the first emergency is past. This is not until the temperature and blood count have returned to normal. Exercise should not be undertaken until the

process of healing is well under way—a period of six to eight weeks. This interval may be estimated by the time needed for the sedimentation test of the blood to return to normal.

5. Frequent change of position of the patient may tend to prevent pulmonary stagnation. Carbon dioxide-oxygen inhalations will aid in clearing areas of atelectasis.

6. In the earlier stages, digitalis is to be used only to combat decompensation. During convalescence, it may aid in recuperation if used over long periods.

7. Sedatives are needed after the first few days to control nervous irritability. Barbiturates, when well tolerated, are satisfactory. When combined with theobromine, they may aid in the restoration of coronary circulation as well as to aid in sedation.

8. Resumption of physical and mental activity should be most gradual and preceded by a period of massage. Close supervision of the effect of exertion will tend to prevent damage and also furnish information as to the reserve strength of the heart.

9. The relation of diet, food, and digestion to coronary thrombosis is of greatest import. Avoid all foods that cause gas in the stomach. Cold liquids in large quantities will slow coronary circulation. Large meals are dangerous. A rest period after meals may prevent distress. Teach the patient the dangers of unwise eating and a few of the things most liable to cause trouble. If he is wise, he will heed the advice.

10. Educate the patient to know the limitations he has. Do not make an invalid of him more than is necessary, but do not let him get into unknown dangers through lack of advice. A permanently crippled heart should never be subjected to the strains it formerly endured. A complete revision of the mode of living to conform to the new situation may insure the victim years of happy and useful life.

ABSTRACT OF DISCUSSION

Dr. C. W. Greene, University of Missouri, Columbia: Coronary diseases of all types inevitably restricts the volume, or the variability in volume, of the coronary circulation, hence affect the nutrition and respiration of the heart. Coronary spasm of physiological origin, and pathologic structural

degeneration both lead to the same terminal crisis, namely, cardiac asphyxiation. Coronary spasm acts directly while degenerative changes indirectly reduce the physiologic coronary dilations in association with all events that normally augment the heart rate and force. It is generally admitted now that the crisis in anginal pain and spasm is asphyxial. Treatment must of necessity strive to overcome or at least reduce the incidence of these asphyxial attacks. Dr. Bortree has quite correctly based treatment on the physiologic coronary flow.

A summarized statement of coronary physiology should be appropriate. This can be given from my own experiments on dogs in establishing facts not yet fully published. The older literature has determined three important facts: (1) That there is a prompt increase in the coronary minute-volume of blood that accompanies every increase in the cardiac rate, the coronary volume being doubled by an added rate of 15 more beats per minute. (2) Efferent coronary constrictor neurones are present in the cervical vagus trunk. (3) An abundant coronary dilator nerve supply is present in the thoracic sympathetic nerves to the cardiac plexus.

With a single exception, no one has previously shown to what extent these efferent nerves are coordinated with events in other parts of the body. Von Anrep in 1926 first demonstrated reflex coronary dilations upon stimulating the afferent units in the cervical part of the vagus nerve.

Coronary studies are made with extraordinary difficulty. The chest must be open and artificial respiration used; the coronary flow must be measured by canulizing the coronary sinus through the auricle; these normal coronary vessels are elastic and respond to the slightest variation in general arterial pressure; anticoagulants must be used and the blood volume increased, recording instruments of great precision are required; the coronary blood must be returned constantly to the normal venous flow; and finally, extensive surgical technic must be used in preparation for the tests.

A number of slides and tables of data are presented to support the deductions which are merely listed here for lack of space. 1. The vagus nerve is rich in afferent neurones which induce delicate and at times pronounced reflex coronary dilations. Reflex vagal constrictions are also indicated but are far more difficult to prove experimentally. 2. Sciatic sensory stimulation, when mild, induces reflex coronary dilation without cardiac acceleration. More vigorous stimulation produces reflex dilation followed by coronary constriction. The sciatic reflex responses are assumed to be typical for all the somatic sensory areas. 3. Sensory visceral stimulation of the coeliac ganglion, or its nerves, influences the coronary vessels qualitatively like the sciatic stimulation, but the per cent of change is greater. 4. Stimulation of the central end of the phrenics not only produces reflex cardiac acceleration, but also profound coronary dilation. The afferent phrenic sensory reactions are associated with extensive areas of referred pain in the neck and shoulder, as shown by Dr. Capps of Chicago, but the phrenics were never previously suspected as sources of reflex coronary dilations.

The coronary vessels are obviously connected with all parts of the body by reflex nerve paths. The mechanism is surprisingly sensitive in its reflex dilator controls, yet reflex constrictor spasms may occur. Coronary dilation is the re-

action for prompt normal increase of the coronary minute-volume of blood flow.

If the coronaries are diseased, sclerotic and stiffened, and have lost the labile responses to the reflex inflow of dilator impulses, it follows that some degree of asphyxiation must be induced during every cardiac acceleration. These facts led me to expound a new hypothesis of the origin of attacks of angina pectoris, the theory of inability of the coronaries to react to dilator reflexes.

This theory of failure of coronary dilation accounts for a certain percentage of anginal attacks just as coronary spasm explains certain types of onset. Both produce myocardial asphyxiation.

Treatment must undertake to increase the supply of oxygen. Dr. Bortree mentioned caffeine and purine bases. In fact, these are the most reliable coronary dilating drugs, as shown experimentally by Gilbert and Fenn of Chicago. Chemical dilation and reflex dilation alike increase the coronary blood supply to the myocardium.

The oxygen content of the blood can be increased by oxygen therapy, thus adding the element of greater oxygen saturation to the factor of greater blood volume. Oxygen therapy has already been used clinically in angina, and its value has been demonstrated in diminishing the number of anginal attacks in chronic coronary disease. It is the agent of choice in acute attacks.

It is of more than special interest that disease of the particular coronary arteries to the rhythm-producing nodal centers leads to cardiac irregularity of rhythm and to the bizarre electrocardiograms referred to by Dr. Bortree.

In light of coronary physiology, a summary of available agencies for treating coronary disease includes: (1) Rest in bed to reduce the coronary-cardiac load. (2) The use of physiologic measures to augment reflex coronary dilation. (3) Medication by chemical agents that induce coronary relaxations—the purine bases and the nitrates. (4) Oxygen therapy to add to the arterial oxygen saturation.

C. N. Meader, M.D., Denver: The amount of morphine that may be required by these patients to produce comfort is enormous, as Dr. Bortree suggested. This is often deleterious in other ways. It depresses the digestive system badly; it may initiate nausea and vomiting; and finally, there are not a few patients in whom the diagnosis must be in doubt, even with careful study, between a coronary thrombosis and an acute abdominal accident, at least in the first few hours.

Here the administration of barbitol preparations, either orally or hypodermically, not only in the later stages as emphasized by Dr. Bortree but in the very acute stage, cuts down the total amount of morphine necessary.

Another helpful measure is the application of local heat over the precordial region either in the form of hot water bags or as mustard plasters. Both serve not only to combat shock but to promote the coronary flow.

Finally, I should like to re-emphasize what Dr. Bortree said about the very prolonged and carefully guarded convalescence. It is often extremely difficult to make patient or physician realize the importance of prolonged rest, yet on it frequently depends future salvation because the restoration which the coronaries may undergo (at least clinically) is remarkable.

James C. Munch, Temple University: I have been requested to discuss Dr. Bortree's paper from a different phase; its relation to current developments in the treatment of angina pectoris. In

collaboration with Dr. Joseph B. Wolff and others, an extensive series of investigations have been under way for the last three years in the medical and pharmacy schools of Temple University and in a research laboratory of Sharp & Dohme. We have studied a product called "Tissue Extract," which has proved definitely valuable in the treatment of angina pectoris. This hormone is obtainable from various tissues, although it appears that it is produced in the pancreas, circulates via the blood stream and is eliminated (in part) in the urine. It is probably the same substance that Professor Vaquez and co-workers have been using in France, as well as other investigators in England, Germany, and Russia. This material is a definite specific antagonist to epinephrine. We have not been able to determine the identity of the active principle, although we have some information regarding its behavior. We do know that it is not choline, acetyl-choline, peptone, nor histamine.

Dr. Wolff presented a paper at the American Therapeutic Society meeting in Atlantic City last year, and papers on this product were presented to the American Medical Association in their Philadelphia meeting last June. These clinical reports state that Tissue Extract administered by injection or by mouth causes dilatation of the coronary arteries. It has been used in the treatment of patients having angina with definite benefit. In the earlier stages of treatment, doses of 1 c.c. to 5 c.c. are injected, while in the later stages somewhat larger doses are given by mouth. Not only has definite benefit been noted in connection with an attack, but the frequency of occurrence of attacks have been markedly diminished.

We have been seeking for Buerger's disease, for thrombo-angitis obliterans, for intermittent claudication and similar pathological involvements to study their response to Tissue Extract.

Dr. Green has discussed the action of the purine bases on the heart and as vasodilators. We have found that Tissue Extract is more definite and more effective.

Dr. Bortree (Closing): It is to Dr. Green and the physiologists that I think we may look for our greatest progress in the relief of some of the symptoms and complications of coronary disease.

Undoubtedly progress has been made in the past few years. They have explained to us why rest is essential. Dr. Green's experiments indicating the oxygen consumption under various circumstances explain the need for the intensive rest that we as clinicians have recognized for many years.

AMERICAN COLLEGE OF PHYSICIANS

Montreal, February 6-10, 1933

Announcement has been made that the American College of Physicians will hold its Seventeenth Annual Clinical Session at Montreal, with headquarters at the Windsor Hotel, February 6-10, 1933.

Dr. Francis M. Pottenger of Monrovia, Calif., as President of the College, has charge of the program of General Sessions. Dr. Jonathan C. Meakins, Professor of Medicine and Director of the Department, McGill University Faculty of Medicine, is General Chairman of local arrangements and in charge of the program of clinics. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general business arrangements, and may be addressed concerning any feature of the forthcoming session, including copies of the program.

EARLY DIAGNOSIS

SEVERE INFECTIONS OF THE HAND*

JOSEPH E. A. CONNELL, M.D.
DENVER

When we consider that 80 per cent of the working population earns its living with its hands, we can readily understand why the early diagnosis and proper treatment of major infections of the hand are so extremely important.

The outstanding errors in dealing with such infections as listed by Weinberg are as follows: (1) Lack of knowledge of the anatomy. (2) Inability to anticipate the direction of spread of the infection. (3) Failure to diagnose the presence of pus. (4) Incising areas where no pus exists. (5) Opening new avenues of infection by improper incisions. (6) Incising lymphatic infections not localized. (7) Improper dressings and improper medication.

Most of these errors are a result of the first, the lack of knowledge of the anatomy. Kanavel says: "It is not enough to control the infection, but we must preserve the function of the hand as well." To do this, a clear conception of the anatomy is essential and should be attained before one attempts the treatment of infected hands.

The three types of severe infections of the hand are lymphangitis, tenosynovitis, and infections of the fascial spaces.

Lymphangitis

Lymphangitis is a spreading infection of the lymphatic vessels. The condition generally follows a slight abrasion or puncture wound. Within a short time the affected finger becomes swollen, red, and painful, red streaks extend up the forearm, and the epitrochlear or axillary glands may be enlarged and tender. The patient becomes toxic. He feels ill, may have repeated chills and a high fever. Examination shows an inflammation about the site of the injury, but

no evidence of pus. The finger can be extended without pain, and there is an absence of tenderness over the tendon sheaths and fascial spaces. There is usually edema on the dorsum of the hand and forearm, although in very acute types there may be little or no edema.

The treatment of lymphangitis is not to incise. Incisions open new lymphatics and favor further absorption. The patient should be put to bed, the arm elevated and enveloped in a warm, wet dressing, and supportive measures carried out. This will suffice in the majority of cases, but where a patient develops a localized abscess or tenosynovitis, it will be necessary to make proper incisions. In such a case, we must remember the possibility of spreading the infection, and should attempt to prevent rapid absorption by keeping the arm at rest and applying Bier's hyperemia for twelve to eighteen hours.

Tenosynovitis

Infection of the tendon sheaths of the flexor tendons may be the result of infection spreading from the subcutaneous tissues, or by direct inoculation. This is probably the most disabling infection of the hand. Good results depend upon early diagnosis, which is not easy, but can be made in most cases. Koch states: "The diagnosis of a tendon sheath infection is based on symptoms which, early in the course of the infection, are limited to the area involved, but which tend very quickly to become more difficult of interpretation because of extension of the infection to surrounding tissues."

The cardinal symptoms of tenosynovitis are flexion of the finger, exquisite pain on extending the finger, tenderness corresponding to the outline of the sheath, and swelling of the entire finger.

The sheaths of the index, middle and ring fingers end proximally at the metacarpal phalangeal articulations, and thus are less difficult to handle if diagnosed early.

The sheath of the flexor pollicis longus becomes continuous proximally with the radial bursa, and terminates an inch above the anterior annular ligament. The sheath of the flexors of the little finger terminates in the

*Read before the Medical Society of the City and County of Denver, Sept. 20, 1932.

ulnar bursa, which also extends about an inch above the anterior annular ligament. When the ulnar or radial bursa is involved the wrist is swollen and inflamed, and the anterior annular ligament is drawn tightly across its volar surface. Kanavel states: "In more than 80 per cent of cases the radial and ulnar bursae communicate, and it is common to find involvement of both."

It is difficult at times to determine early whether or not one is dealing with a type where the bursae communicate. If the infection has started in the little finger and has spread to the ulnar bursa, the position of the thumb and pain on its extension will help in diagnosing spread of the infection to the radial bursa. If still in doubt, it is better to open the bursa in question through a bloodless field. If the infection begins in the thumb, the same conditions apply with reference to the ulnar bursa and the little finger.

The treatment of tenosynovitis will be discussed with that of infection of the fascial spaces.

Fascial Space Infections

There are five fascial spaces of the hand, the middle palmar space, thenar space, hypothenar space, dorsal subcutaneous space, and the dorsal subaponeurotic space. We need only consider here infections of the middle palmar and thenar spaces, since they are the most frequently involved.

Infection in these spaces may occur from direct inoculation following trauma, from lymphatic or tendon-sheath infection, spread of pus in the web spaces along the lumbrical muscles, from osteomyelitis of the metacarpal bones, and from one space to the other. When the mid-palmar space is involved, we first notice that the concavity of the palm is lost. There is exquisite tenderness over the space, and the fingers are rigidly flexed, the rigidity being more marked in the little finger. The dorsum of the hand is swollen and edematous, and there is an associated swelling of the thenar space. Later, the palm bulges and the tenderness grows less as the swelling becomes more marked.

In infections of the thenar space there is

a ballooning of the thenar eminence with extreme tenderness and throbbing pain. The thumb is pushed away from the hand and the distal phalanx is flexed. The web is swollen and edematous. In both thenar and mid-palmar space infections there may be a severe systemic reaction.

Treatment of Tendon Sheath and Fascial Space Infections

Raison states: "Treatment of the infected hand is anatomy plus common sense." If one knows the anatomy, common sense will direct the incisions, which should be made under general anesthesia and with a bloodless field.

Incisions for the tendon sheaths of the fingers should be made at the sides of the fingers to avoid the flexion creases, also the vessels and nerves, and to prevent a herniation of the tendon. The edematous tissue should be well retracted to afford a clear view of the sheath before it is opened. Infections in the tendon sheaths of the little finger or thumb require extension of the incisions to include the ulnar or radial bursa, as the case may be. The incision for the ulnar bursa should follow the course of the tendons to the little finger, which is obliquely upward and radialward. The incision for the radial bursa should curve to the ulnar side of the thenar eminence to avoid the thenar muscles. In both these cases an incision should be made at the ulnar side of the forearm. An incision should never be made over the volar surface of the wrist, as the pus lies under the flexor tendons.

For the mid-palmar space the incision is made between the middle and ring fingers, starting a little above the web and extending to the middle flexion crease of the palm. The vessels, digital nerves and flexor tendons of the middle and ring fingers must be retracted to their respective sides, an artery forceps is thrust into the abscessed space and the blades opened.

The thenar space is drained by an incision on the dorsum, to the radial side of the index metacarpal, opposite its middle and on a level with its flexor surface. An artery forceps is then thrust into the thenar space across the flexor surface of the index

metacarpal. For a clear conception of these incisions one is referred to the illustrations in Kanavel's book, "Infections of the Hand."

The wound should be packed lightly with vaseline gauze to stop oozing and to convert the incision into an open cavity. Neither tubes nor through and through drainage should be used, because of the danger of pressure necrosis to the tendons and sheaths, and extensive fibrosis is apt to result from their use.

The hand should be dressed in the optimum position of function, with copious warm boric or saline dressings. These should be changed in twenty-four hours under sterile precautions, to prevent secondary infection. The packs are then removed and, if deemed necessary, vaseline strips are placed between the skin edges to keep them open. The skin should not be allowed to become sodden by keeping the wet dressings on too long. They should be discontinued as soon as the active inflammation is under control, usually from twenty-four to forty-eight hours, and active motion should be instigated.

Conclusions

1. Pus does not necessarily coincide with the maximum swelling, but the point of maximum tenderness is a better guide.
2. The symptoms of infection may be marked and manifest or obscure and misleading. The local symptoms usually predominate, and lead one to an early diagnosis.
3. Puncture wounds play a most important role in severe infections of the hand.
4. The volar surface is more apt to become infected and the infection of greater danger because of its peculiar anatomy.
5. Early diagnosis and adequate incisions are imperative to good results.
6. General anesthesia should always be used in major infections of the hand, as local anesthesia is apt to lead to inadequate drainage, and there is the added danger of carrying the infection into a small vessel while injecting the anesthetic.

REFERENCES

1. Weinberg, Joseph A.: *The Nebraska State Medical Journal*, 11: 144-146, (April) 1926.
2. Kanavel, A. B.: *Infections of the Hand*, Ed. Phila., Lea & Febiger, 1925.
3. Koch, S. L.: *The Journal of the Kansas Medical Society*, 28: 10-16 (January) 1928.
4. Raison, C. A.: *The American Journal of Surgery*, 6: 530-534 (April) 1929.

In the process of the physician's education after graduation, clinical trips play an important part. These trips should be made for the purpose of investigating and studying the achievements of others. Time should not be consumed in the observation of inferior work. Attendance at medical meetings is helpful, because opportunities are afforded for the exchange of views, and for better understanding of the personalities of forceful men of the medical world who are contributing to progress.

Above all, familiarity with the contents of medical journals is essential. Every practitioner of medicine should charge himself with the obligation of devoting at least an hour a day to their study, and should pay the debt. If for any reason he misses a day or two he should make up the time, but if on any one day he is able to read for a number of hours, he should credit himself with only the single hour. The man who follows this course will, almost unconsciously, become well informed in medical matters, and if he has the power to apply and correlate this knowledge with his own experience, he will become a leading member of the medical profession. Many men, in speaking of an original conception of a disease, an original method of treatment, or an original operation, have informed me that the idea came to them in the attempt to correlate their own experiences with those reported by writers of articles in medical journals.

To the physician, patients represent medicine in practice; books on medicine represent stabilized medical opinion; and medical journals—the very breath he breathes—represent medicine in the making.—From an editorial by Dr. William J. Mayo.

Our new address is 537 Republic Building, Denver. What can we do for you?

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

National Survey Shows Low Per Cent of Relief Funds Spent for Milk

Only 2 to 16 per cent of the emergency relief funds expended for food is allocated to milk, a survey of the cities having available records indicates. The reports of only two cities show the higher figure.

The winter of 1932-1933 will be characterized by wide use of the taxpayer's money in unemployment relief. Already 300 million dollars have been appropriated by Congress. Evidently this will be more than doubled by the states, and the cities will add still more.

The milk industry is interested in stressing the importance of milk in emergency diets for two reasons: 1. To establish the milk drinking habit among the people on relief, so that when the depression is over, they will continue to use it adequately. 2. To stimulate all consumers to use at least a quart of milk for every child and a pint for each adult daily. An adequate expenditure for fresh milk according to scientific standards is at least 20c of each food dollar.

How to Ventilate in Winter

Scientists have proved that airborne diseases annually take more lives than were sacrificed in the World War. Despite the fact that air is more important to life than food, the average person has been slow to appreciate this. We can live many days without food, but deprived of air even for a few minutes, we die.

Air becomes defiled by dust, smoke, fumes, and gases. It becomes uncomfortable because of heat, cold, impurity, dryness, or excessive moisture. Today we live in a new era of indoor comfort. We can warm our air, wash it, moisten it, and enjoy the benefit of draftless air in winter and washed and cooled air in summer because of mechanical devices.

Science is agreed that an average temperature of 70 degrees, with a humidity approximately 40 to 45 per cent, is best for us.

Physicians believe that the air in most homes contains a quarter or less of the amount of water vapor it should have and that practically all homes today are overheated.

There are humidors on the market which lead to considerable saving of fuel because more comfort is experienced in a temperature of 65 or 68 degrees, with the air properly humidified, than in temperatures of 80 or 90 degrees when the air is dry. These devices used on the radiators are all absolutely efficient. Few evaporate as much water as one person gives off from his lungs.

When air is heated, it holds more water or humidity than cold air does. If the heated air of winter is not artificially supplied with humidity it absorbs moisture from the skin and delicate membranes of our breathing organs. The surface of these membranes becomes harsh, cracked, and scaly, which makes a perfect medium for germs to lodge and grow in ready for attack at the first moment of lowered resistance. — From "Everybody's Health", October, 1932.

Three Hundred Forty-four of Five Hundred Criminals Mentally Normal

Unemployment, improper home conditions, and lack of education were outstanding factors in the lives of 500 Milwaukee criminals studied by Dr. R. E. Bushong, psychiatric director of the Milwaukee County Mental Hygiene Clinic.

Dr. Bushong's survey disclosed that at the time of committing crimes, 302 of the 500 were unemployed. The majority were in good physical condition. Mental tests showed 344 were normal, 12 insane, 46 feeble-minded, 13 psychopathic, 14 psychoneurotic, and 81 had abnormal traits.

Most of the subjects were single and the average was twenty-seven years and eight months. The majority had less than an eighth grade education. Serious quarrels with parents were found in the majority of cases. Only 52 of the 500 studied have a favorable outlook for the future, Dr. Bushong reported. The outlook was reported doubtful in 229 cases and unfavorable in 219.—From Mental Hygiene Bulletin, June, 1932.

Dr. Kaplan Makes Report of Survey on Denver's Infant Mortality

The Infant and Maternal Mortality Study in Denver, conducted by the Denver Public Health Council and directed by Dr. A. D. H. Kaplan, covered a twelve-months period ending February 28, 1931. Each live birth, stillbirth, and infant death was studied. The stillbirth rate was 33.8 per 1,000 live births and the mortality rate on live births 77 per 1,000. The object of the paper was to show how the infant mortality problem reflects the social and economic conditions of the community.

The district along the Platte, with a predominance of old shacks, showed the highest death rate. More than one-half of the infant mortality in the best districts occurred during the first 24 hours. The favorable districts suffered slight loss among the babies that lived past the first 24 hours; the poor districts had the preponderance of their losses as the year advanced. Among the negroes the rate was only 15 per 1,000. This may be due to the Visiting Nurses' welfare station in the negro section, of which the negro women avail themselves for prenatal care and good housing conditions. As contrast, for all Mexican live birth (294) in the city, the infant death rate was 206. The Mexican stillbirths were likewise out of line with 61 per 1,000 live births. In the lowest income group the loss after the second week is more than twice that of the first fortnight. In the highest income class, the additional deaths after the first two weeks represent only 11.1 per cent of the yearly mortality.

For the section of Denver's population having family incomes under \$500 the infant mortality rate is 186 per 1,000 live births. For the income class of \$3,000 and over, the infant death rate is only 25 per 1,000.

The chief causes of death were prematurity, pneumonia, respiratory diseases, diarrhea, and enteritis. As might be expected, the small number of prenatal visits is found to predominate among the stillbirths and live birth deaths, while most of the infants who lived through the first year were born to mothers who had had the benefit of five

or more prenatal visits.—*Journal of Public Health*, October, 1932.

The Scope and Purpose of Parent Education

Parent education is a movement within such fields as home nursing, mental hygiene, social service, home economics, pediatrics, and medicine, rather than an independent movement. Parents of today are universally hungry for knowledge which will help them in putting over the task of properly rearing their children. Parent education is a movement among the folk.

What, then, is the aim of parent education? The aim of parent education is to guide parents in order that they may use the knowledge which they have rather than to pass on to parents what they should know. The teaching of parents is more subtle than the teaching of college students. Adults will not follow unless their needs are met. The successful teacher of parents must be free from domineering tendencies, must possess emotional sensitiveness and emotional integrity, and must also be able to maintain an objective point of view. The field of parent education is not so much the teaching of new subject matter as a new way of teaching.—Ralph P. Bridgman, *Columbia University*. "*Journal of Home Economics*," October, 1932.

California State Medical Association Adopts Periodic Payment Plan for Medical Care of the Wage-Earner: Under this plan all physicians in good standing are eligible to join the County Society, and all hospitals which wish to cooperate are listed with the Society. Each County Association would decide its own plan for payment, types of service to be rendered, length of hospitalization, and limits of income within which a beneficiary is eligible. People having an income in excess of the maximum limit set will not be entitled to this service. Beneficiaries, upon payment of a set sum, may choose their physician and hospital from the list of the County Society. In this way the physician-patient relationship is not disturbed and the patient's wishes respected.—*Western Hospital Review*, October, 1932.

LIBRARY NOTES

"A Library Is a Summons to Scholarship"

EDITOR: J. J. WARING, M.D.

BOOK REVIEWS

Varicose Veins, With Special Reference to the Injection Treatment. By H. O. McPheeters, M.D., F.A.C.S. Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital; Attending Physician New Asbury, Fairview and Northwestern Hospitals, Minneapolis, Minn. Illustrated with 62 Half-tone and Line Engravings. Third revised and enlarged Edition. Philadelphia: F. A. Davis Company, 1931. 272 pages. Price \$4.00.

This is an excellent text for the practitioner who desires to study or to practice the injection treatment for varicose veins. It gives a fine collection of illustrations of all phases of the subject. The author has recognized and dealt well with the doubt in the minds of many physicians as to the safety and efficacy of this new treatment. The associated complications and their treatment are also well explained.

The various solutions used in this treatment are very well portrayed in a special table on page 111, and the limitations of pregnancy on page 112.

This text is essentially practical, though spending several chapters on such interesting questions as anatomy, embryology, etiology, and the history of the injection treatment. There is a comprehensive bibliography appended.

EARL J. PERKINS.

Modern General Anesthesia. A Practical Handbook. By James G. Poe, M.D. Lecturer on General Anesthesia in the Medical and Dental Department of Baylor University; Anesthesiologist of Baylor University Hospital of Dallas; Consulting Anesthetist to the Shriners' Hospital for Crippled Children, and Parkland Hospital, Dallas, Texas, etc. Second Edition, completely revised and enlarged with 12 illustrations and 2 charts. Philadelphia: F. A. Davis Company, Publishers. 1932. 226 pages. Price \$2.50.

The subject has been presented in a very comprehensible manner and in a concise form.

It presents the fundamentals and leaves the theories to be expounded in the larger works. It deals with the different anesthetic agents, giving the methods of their use and the different signs and symptoms caused thereby, during the stages of induction, maintenance, and recovery.

The section on the choice of the anesthetic agent to be selected for different types of operations and for the patients of different ages and physical conditions is written with great care. The comparative charts giving signs and symptoms under different anesthetic agents are very helpful.

To elicit the corneal reflex by touching the cornea with the finger, appears to me an unnecessarily dangerous procedure in that it might cause a corneal ulcer and because lightly touching the eyelashes is a sufficiently sensitive test to cause the eye to close unless the patient is asleep.

One can not read this well-written book without realizing the many important points to be con-

sidered and properly interpreted. To do so the anesthetist should have had a thorough training in medicine in order that the patient may have the greatest comfort and safety.

A working knowledge of general anesthesia is essential to the surgeon, medical man, and dentist because they should be in a position to know that the well-being of a patient is being properly safeguarded.

R. L. CHARLES.

The Life Line of the Thyroid Gland. A contribution to the study of Goitre. By Colonel P. McCarrison, C.I.E., M.D., D.S.C., LL.D., F.R.C.P., I.M.S., Honorary Physician to the King; Director, Nutritional Research, Indian Research Fund Association, and K. B. Madhava, M.A., A.I.A., Professor of Statistics, University of Mysore. From the Indian Medical Research Memoir, Memoir No. 23, March, 1932, pp. 1-378. Calcutta: Thacker, Spink & Co., Ltd., 1932.

This work was undertaken in an attempt to fill up some of the gaps in the etiology of goiter as set forth by McCarrison in his memoir of 1927. The approach was made by attempting to establish a standard or norm of size for the accompanying physiological changes that take place under such influences as age, sex, puberty, pregnancy, seasons, etc.

Emphasis is laid on the untrustworthy conclusions from goiter surveys, particularly in school children, because of a failure to use fixed standards of size and a failure to appreciate the dividing line between physiological and pathological hypertrophy. The authors attempt to create such standards by studying the body-gland ratio throughout life in a large number of albino rats. These standards they have picturesquely designated "the life-line of the thyroid gland". They emphasize that the thyroid gland is a living organ associated with the development of the body and not a chronological event.

The normal body-gland ratio is set forth in protocols, tables, and corrected tables in such numbers and with such detail that belief in the authors' conclusions is almost inescapable. After establishing a satisfactory norm of the thyroid life line, the memoir concludes with an unusually stimulating chapter on the etiology of goiter. Iodine is still believed to be a most powerful anti-goitrogenic agent, but appropriate dietaries and hygienic living are also powerful factors in the prevention of goiter.

An American reader cannot escape the conviction that the goiter problem in the Himalayas and Alps is quite different from the goiter problem in the United States. There endemicity seems to be more marked and the end results of cretinism, myxedema, and idiocy are infinitely more common. Here the problem seems to center more about some type of toxicity. Perhaps ours is the first racial symptom in a newly inhabited country, and barring anti-goitrogenic precautions, future generations may suffer from the congenital hypofunctional states endemic to the mountainous areas of the old world. However different the problems, their solution starts from the common denominator of a normal gland. The authors have gone a long way to stimulate an interest in standards of "normalcy" by which the abnormal may be accurately determined and the causes more clearly understood. The memoir is a publication well worth careful reading on the part of students of goiter.

C. F. KEMPER.

Life of Edward Jenner, Naturalist and Discoverer of Vaccination. F. Dawtrey Drewitt, M.A., M.D., F.R.C.P. Cloth, 131 pages. London: Longmans Green and Co. 1931.

This little book tells what we most want to know about Jenner. It brings out important facts of his life more clearly than they were brought out in the two-volume biography published by his friend, Dr. John Baron, within fifteen years after his death. The story is told with an appropriate setting in the history of Berkeley and the West of England where Jenner was born, did his work, and died, as a country doctor. As a schoolboy, he gathered fossils and nests of dormice, and observed the habits of the cuckoo.

As apprentice to a surgeon at Sodbury, he learned pharmacy and surgery and heard a milkmaid tell that she could not take small-pox because she had had cow-pox. He studied in London with John Hunter, lived two years in his house, and made him a life long friend. He declined partnership with Hunter, and went back to Berkeley where he examined bodies of diseased animals and studied cow pox. Hunter advised him about it: "Do not guess, but try." In 1796, he took matter from the hand of Sarah Nelmes, infected by milking a cow, and vaccinated James Phipps. In 1798, he published his first pamphlet on vaccination and gave the last twenty-five years of his life to extending the knowledge of it.

The anti-vaccination movement in England started at first against those who were practicing inoculation of small-pox in childhood to prevent it in later life. It was helped by those who tried vaccination without the necessary precautions that Jenner had worked out and insisted upon. But vaccination spread to other countries, removing small-pox from the list of dangerous diseases. Even so late as 1889, Charles Creighton, M.D., who had studied in Berlin and Vienna but failed in practice in London, published a book of 300 pages written in London libraries to prove that cow-pox was small-pox, and vaccination does not exercise any protective power against human small-pox and that Jenner's account of the cuckoo, confirmed by all naturalists, was false. It was a fine specimen of how falsehood can travel while truth is getting established.

This book is well written and well printed; although it is a small book, it has a fine index. Its frontispiece is a reproduction of the portrait of Jenner, painted by Northcote for the Medical Society of Plymouth in 1802. It is a book that can be recommended to the general public as telling the truth about vaccination and giving a clear idea of the true scientist and how he works and looks at life.

EDWARD JACKSON

A Doctor of the 1870's and 80's. By William Allen Pusey. Sometime President of the American Medical Association and of the American Dermatological Association. 1932. Springfield, Illinois, Baltimore, Maryland: Charles G. Thomas, publisher. 153 pages. Price \$3.00.

Dr. Pusey has performed a task prompted by filial affection in writing "A Doctor of the 1870's and 80's." The subject of the sketch is the author's own father. The story is honestly written without any apparent effort to exalt the abilities or virtues of his father. It gives a true account of practice in and about a Kentucky village sixty years ago. It reminds the reader of hardships of practice of which we are now relieved, of doubts now removed of many defects in knowledge since repaired.

Though Dr. Pusey was doubtless impelled by a desire to tell the modest story of his own father, he has written for us a true history of a period in the practice of medicine in central United States.

C. S. ELDER.

History of Medicine Series. Issued under the Auspices of the Library of the New York Academy of Medicine. No. 11. Hieronymi Fracastorii De Contagione Et Contagiosis Morbis Et Eorum Curatione, Libri 111. Translation and Notes by Wilmer Cave Wright, Ph.D. Professor of Greek in Bryn Mawr College. New York and London: G. P. Putnam's Sons. The Knickerbocker Press. 1930. 351 pages.

Those interested in the history of medicine will welcome this authoritative English translation of Fracastorius, whose early sixteenth century writings definitely place him among the pioneers of scientific medical thinking.

He lived in an era of intense intellectual activity, the most brilliant period of the Renaissance when Italy was being glorified by the genius of her artists, poets, and scientists; in this activity, Fracastorius took a leading part.

His interests were almost universal—literature, geology, mathematics, botany, astronomy, philosophy. Medicine, however, was his major interest, and it is in this field that he is best known.

His thought is often obscured and at times wholly buried in mysticism, and the poem seems to us a most unsuitable literary form in which to write of syphilis, yet he clearly expressed the basic facts concerning infections of all kinds, his theories to be confirmed by the invention of the microscope and the work of Pasteur and Lister.

He first applied the name syphilis to that disease and made the first scientific statement of the nature of infectious diseases and the modes of their transmission. He used the terms "germs," "contagion," and "fomites" with their present meaning.

He recognized the communicable nature of typhus fever, the plague, rabies, phthisis, syphilis, and the acute exanthemata, and urged the need of public and private precautions to prevent their spread. His clear thinking, however, did not extend to the treatment of disease and he continued the irrational methods of his time.

This book shows that regardless of time, place, or circumstance, highly scientific work may be done without artificial or mechanical aids if a superior intellect be animated by the true scientific spirit.

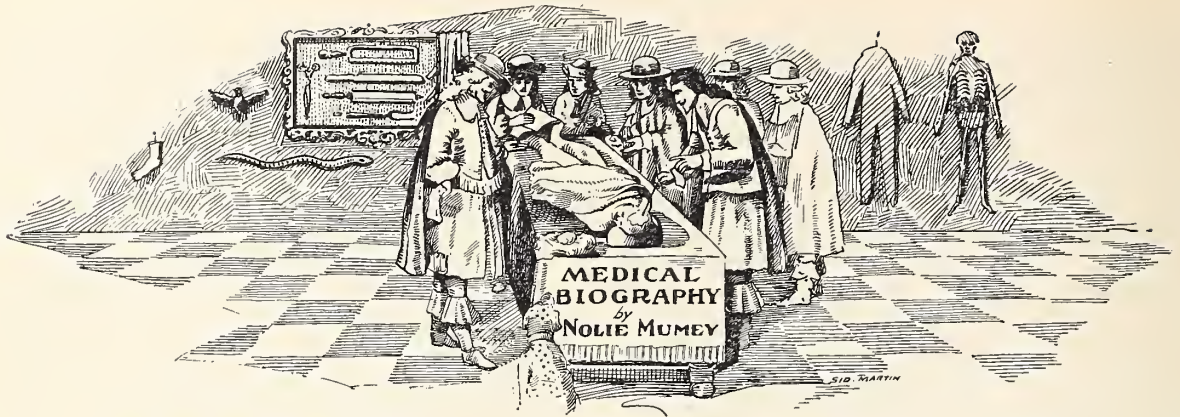
A. J. MARKLEY.

Minor Surgery. By Frederick Christopher, M.D., F.A.C.S., Associate in Surgery at Northwestern University Medical School; Attending Surgeon, Evanston Hospital, Evanston, Illinois. Published in 1929. Philadelphia: W. B. Saunders Company.

This book is a splendid treatise of 668 pages devoted to minor surgery. The subject matter is discussed adequately, in logical sequence dealing with the diseases of each anatomical part in turn. The book is amply illustrated with 465 figures which are for the most part exceedingly well done. A very attractive feature of this volume is the extensive bibliography which for convenience is listed at the foot of each page.

The last chapter, entitled "The Surgical Intern," is invaluable to house officers. This chapter describes most comprehensively the duties and obligations of a surgical intern.

JNO. M. FOSTER, JR.



SILAS WEIR MITCHELL

(Continued from December Issue)

Silas Weir Mitchell was one of the most striking figures in American medicine, living in one of the most chaotic periods of our history—before, during, and after the Civil War. He was the finest type of physician, combining sympathy, force, and rare gifts of judgment in his personality; all of these added greatly to his success as a neurologist. His enthusiasm and loyalty inspired others; his influence alone was a potent factor in advancing medical science. He was a teacher of those who taught, although he was never a professor in any medical school except for five minutes during the time that he was a trustee at the University of Pennsylvania. At a board meeting he was asked to retire, and during his absence was elected Professor of Physiology, which he immediately resigned after being informed of the appointment. During his trusteeship, he was instrumental in securing many excellent teachers for the University, one of whom was William Osler. His position was well explained by a statement of Harrison Allen, who said to him: "Thou shalt not be king, but thou shalt beget kings."

As many as 160 men are numbered among his assistants or colleagues, many of whom became prominent in the profession. Between the years 1889 and 1907, twenty-five men who served under Dr. Mitchell in hospitals contributed 522 papers to medical literature.

The first ten years after graduation Dr. Mitchell devoted much of his spare time to research in comparative anatomy, physiology, and toxicology. He was appointed surgeon in the United States army in 1862

and served until 1865 and later became assistant surgeon of Turner's Lane Hospital. In the latter capacity he had a very interesting and successful career serving under William A. Hammond, the surgeon general.

In May, 1863, Dr. Mitchell and Dr. George R. Morehouse were ordered to take charge of a hospital for soldiers suffering from nervous diseases which later included nerve injuries. This resulted in an overcrowding so that a new hospital had to be built in Turner's Lane to accommodate these additional patients, bringing the capacity up to 400 beds. In this new institution Dr. Mitchell was associated with Drs. Charles H. Alden and William W. Keen. The added facilities afforded them excellent opportunities for study which resulted in the publication of important papers relating to their work. Among the early and important contributions was the one on gunshot wounds. During Dr. Mitchell's service as an army surgeon he was employed also by the sanitary commission as an inspector of hospitals.

He was one of the few physicians at that time to realize the value of having trained nurses and was among the first to sponsor a movement for the organization of a nurses' training school, which he did after he was appointed to the staff of St. Joseph's Hospital in 1858. Previous to this time, nursing services were usually given by sisters who had very little training in their profession. Dr. Mitchell was bitterly abused by newspapers and Catholic journals for making the statement that trained nurses were far better than the sisters. Dr. Keen said, "Dr. Mitchell was the most fertile, stimulating medical man I have ever met either here or abroad."

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

Better Relations With the University Hospitals

EVER since the Annual Session at Estes Park last September, the Colorado State Medical Society's Advisory Committee to the School of Medicine and Hospitals has been hard at work studying the Colorado General and Colorado Psychopathic Hospitals' relations to the practicing medical profession, with a view toward bettering these relations. This work has involved a detailed investigation of the seven formal complaints registered against the institutions before the House of Delegates, which the House turned over to the committee for disposal.

Until now, your Committee has withheld publication of any of its acts. Much of the work, both in and out of Committee meetings, has been of a confidential nature. Suggestions and advice which your Committee issued to the Dean of the Medical School, and, through him, to the Board of Regents of the University of Colorado, could not well be published until those advised could reply.

However, your Committee has been cognizant of an increasing misunderstanding between the practicing physicians on the one side, and the hospitals, their executives and their staffs on the other. For the latter reason, and, since within the last few weeks some definite results have accrued, the Committee's silence is broken.

As a result of actions taken by the Committee at its October 28, 1932, meeting, three important announcements can now be made:

First: On advice of the Committee, the Board of Regents has altered its rules concerning admissions to Colorado General Hospital so that in the future no patients will be admitted who are able to pay more than \$3.00 per day for their hospitalization and medical care. This eliminates the "\$5.00-per-

day patients" entirely. A majority of your Committee feels that the hospital should admit charity cases only; but such a form of admission would require a change in the present law. The Regents have therefore done as much as they can under existing conditions.

Second: On advice of your Committee, the Board of Regents has voted to discontinue the employment of a publicity agent for the University of Colorado School of Medicine. This should eliminate all embarrassing publicity of individual doctors' names at the hospitals, to which the practicing profession has justly objected.

Third: At the request of Dr. Franklin G. Ebaugh, Director of the Colorado Psychopathic Hospital, the Committee has instituted measures which, it is hoped by all concerned, will largely if not entirely eliminate the personal publicity given to him and to other physicians connected with the hospital by the public press.

Practices which these three accomplishments hope to correct have, in the opinion of the Committee, been the primary factors in misunderstandings between the institutions and the physicians of the state. The Committee recognizes that these three are not the only "sore spots," and it has undertaken much additional work and many conferences with representatives of the hospitals and of the University toward correction of other faults.

It is proper, however, at this time to remind the physicians of Colorado that they themselves are the only ones who can correct many of the abuses that have been most severely criticized. Notable among these is the admitted fact that some patients obtain admission to Colorado General Hospital who are not in the indigent or semi-indigent classes which the hospital is intended to

serve. There are only two ways in which these patients can gain admission; one by a certificate of a board of county commissioners, the other by a certificate from a regularly licensed physician. The Committee does not ask, nor should physicians expect, the hospital to maintain a state-wide social service investigative system capable of checking up on every applicant at his home. Such would be financially impracticable, if not wholly impossible.

To correct these abuses, physicians must unitedly refuse to approve county commissioners' certificates when the patient seeking admission is not indigent, and physicians must unitedly refrain from issuing their own certificates to such patients. Your Committee has found that it is a too frequent practice for a physician to wink at his patient's financial status and send him to Colorado General Hospital rather than to refer the patient to a colleague for consultation, or, in other cases, send him to Colorado General Hospital rather than to do the necessary work at home for a reduced fee.

Physicians have the political strength, if they will but use it, to force their respective county commissioners to observe the law in respect to the indigency of patients sent to Colorado General Hospital. They have the facilities, through their county medical societies, for frank talk about any and all patients improperly sent to the institutions.

Your Committee again reminds all members that it is organized to serve the entire State Medical Society, to do what it can toward correcting abuses of the privileges offered by the teaching hospitals, to receive any and all complaints from members. The Committee welcomes these complaints, and members' suggestions; all will be thoroughly investigated and reported upon. Communications to the Committee may be addressed to any member of the Committee, or in care of the Executive Secretary of the Society, 537 Republic Building, Denver.

ADVISORY COMMITTEE TO THE SCHOOL OF MEDICINE AND HOSPITALS.

JOHN S. BOUSLOG, Denver, Chairman;
T. D. CUNNINGHAM, Denver;
CHARLES O. GIESE, Colorado Springs;
N. A. MADLER, Greeley;
C. E. SIDWELL, Longmont;
F. B. STEPHENSON, Denver, ex-officio.

New Quarters for The State Society

THE new address of the Colorado State Medical Society and its official Journal, *Colorado Medicine*, is 537 Republic Building, Denver.

The leasing of new quarters was authorized by the Board of Trustees of the Society at its fall meeting. Necessary details were worked out so that the change of address was effected as of January 1, 1933. The change will save more than \$300.00 per year in rent, this saving being the principal factor entering into the Trustees' decision. In addition, the new quarters will prove more adaptable to the Society's needs, particularly in view of the steadily increasing number of the committee meetings held in the offices each week.

The Executive Secretary and his staff bespeak the cooperation of all readers of *Colorado Medicine*, especially all officers of county societies, in spreading the word concerning the new address, so that correspondence will not be delayed. A postcard notice has been sent to all officers and committee members, as well as to many other frequent correspondents. All members are invited to visit the new offices at their earliest opportunity. All are reminded again that the State Society's office is their office, designed to serve them in every possible way, theirs to command at any time.

Remember the new address—537 Republic Building, Denver. The telephone number, KEystone 0870, remains the same.



Medical Organization Faces Its Supreme Test

PROBLEMS that the medical organization must solve, questions it must answer, have multiplied during the last two years more rapidly than the most far-sighted could predict. Medicine has been attacked from all sides, including the inside. Powerful interests have accused it of failure—failure properly to distribute its services, failure

properly to train its young men, failure to make its services available at properly adjusted costs, failure to improve the quality of its work as recorded by vital statistics, failure to promote public health, failure to solve its internal problems.

Every accuser has advanced his pet remedy, frequently conceived in ignorance and born in the belief that if medicine is to do its job it must be controlled from the outside.

From one source and another these charges have come until at last even the much publicised Committee on the Costs of Medical Care repeats them and in its majority report offers its own scheme, which in a word is Socialism. The Committee was far from unanimous. Not just one but several, and varying, minority reports were issued, so that The Philadelphia Record comments editorially that the Committee "has succeeded only in out-Wickershamming the Wickershammers." The majority report will, however, receive the most publicity. Thousands of physicians and millions of laymen will never hear of the minority reports, much less see or read them. Too few will read the carefully considered editorials in the December 3 and December 10 issues of the Journal A. M. A.

A few of the accusations made against the medical profession are probably true in part. Some are simply the wails of depression pessimists. Some are the false accusations of the enemies of medicine, and some frankly spring from pure ignorance. Some points in the "remedies" are well taken, others are ridiculous, a few are patently un-American and communistic.

No matter what the source of the charges, they can no longer be ignored. No matter how ridiculous or un-American the proposals for medical revolution, they can no longer be laughed off. So far the challenges of Medicine's critics have remained largely unanswered, and so, logically, few counter proposals for improving medical practice have come from medical organization. Judging from the character and personnel of the profession, we predict that these critics will be answered, and that medical men will

choose to fight for their principles when it is necessary.

The problem now is to convince physicians that the time has come when they must either fight for their profession, or lie down and beg alms from the socialistically minded "economists." The problem now is to convince doctors that no program of advancement can be promulgated by medical organization unless medical organization is in itself strong and efficient. Medical organization will present remedies. Doctors must be ready for them.

Nothing can be accomplished without team work. Nothing can be even well started without responsive cooperation on the part of the entire system of medical organization, county, state, and national. Organization unity is the first requirement. The foundation of all medical organization is the county society. Every such society in Colorado can and must be brought at once to a high point of efficiency. Every one must be mobilized to its greatest possible numerical strength. None can be allowed to become static through indifference.

Every physician is dependent upon his county, state, and national medical organizations for the maintenance and protection of many privileges to which he is now so accustomed that he seldom realizes their existence. This is true whether he is, or is not, a member of his medical society. Conversely, the basic and higher medical societies are dependent upon him for the weapons with which they fight his battles. Without his financial support through organization dues—without his moral support and encouragement of officers—without his time and effort frequently given to committees, and his willing shouldering of responsibility—where would we be?

Every physician should be made to realize this interdependence. Every one must carry a trifle of additional burden in 1933. The tasks are harder, our purses are thinner and some of us are weary, but this can be our greatest year if we determine, each for himself, to make it so. We are facing our supreme test, in that darkest part of the night. Where will the dawn find us?

MEDICAL ECONOMICS

Beginning with this issue, Colorado Medicine plans to publish each month a brief statement from the Colorado State Medical Society's Committee on Medical Economics, discussing timely points in the development of professional thought on related subjects. The following is the first of these comments.

* * *

HOSPITAL INSURANCE

We are reading and hearing a good deal about various insurance schemes these days.

Generally speaking all health insurance plans should be viewed with uncertainty as to their value to the mass of physicians.

Hospital insurance thus far seems to be a benefit to the hospital directly and to the physician indirectly. When hospital expenses have been provided, the physician's bill has a better chance of being paid.

However, hospital insurance is not entirely an advantage to the physician. As long as it remains within its purpose and intent it will help both hospital and physician. When it steps beyond its purpose, and there is a great temptation for it to do so, hospitals may and can enter the practice of medicine.

Having the building, the equipment and the business, secured by means of its policies, it would be only human and natural to consider their use as an entrance into the practice.

Hospital insurance is not a certain, unmixed advantage to the profession.

C. E. COOPER,

Chairman Committee on Medical Economics.

MEDICAL SOCIETIES

BOULDER COUNTY

The regular monthly meeting of the Boulder County Medical Society was held at the Elks Club in Longmont, Thursday, December 8, 1932. Dr. Roy P. Forbes gave a demonstration of the Mantoux Test for Tuberculosis and Dr. F. B. Stephenson spoke on "Tuberculosis in Children." Dinner preceded the scientific program.

M. L. JOHNSON,
Secretary.

* * *

CROWLEY COUNTY

The Crowley County Medical Society met December 20 at Dr. J. E. Jeffrey's office in Ordway. All of the members were present. Dr. G. M. Baker read a paper on "Influenza," which was followed by a general discussion of its complications, sequelae, and their treatments.

The following officers were elected for the ensuing year: Dr. G. M. Baker, president; Dr.

O. E. McCleary, vice president, and Dr. J. A. Hipp,
Secretary.

J. A. HIPP,
Secretary.

* * *

FREMONT COUNTY

Dr. W. M. Bane and Dr. J. M. Shields of Denver were the guest speakers at the regular monthly meeting of the Fremont County Medical Society held in Florence, Monday, November 28. Dr. Bane spoke on "Some of the Modern Methods of Treatment of Diseases of the Eye" and Dr. Shields presented some photographs illustrating normal and pathological conditions of the internal eye.

A. BEE,
Secretary.

* * *

KIT CARSON COUNTY

The regular monthly meeting of the Kit Carson Medical Society was held December 5 at Genoa. Doctors H. R. McKeen, H. B. Henderson, Frank B. Stephenson, and Mr. Harvey T. Sethman were guests at the meeting. Dr. McKeen spoke on "Treatment of Skull Fractures," Dr. Henderson on "Some Practical Points in Modern Obstetrics," and Dr. Stephenson and Mr. Sethman discussed organization matters. All members of the Kit Carson County Society were present and a few other doctors of the district were guests. Officers of the County Society and guests were entertained at dinner at the home of Dr. Walter C. Keller.

W. C. KELLER,
Secretary.

* * *

LARIMER COUNTY

Dr. Charles Rymer of Denver was the principal speaker at the December 7 meeting of the Larimer County Medical Society held in Berthoud. Dr. Rymer spoke on "Psychiatry and Mental Hygiene, and Their Relations to the Physician." Election of officers took place and the following men were chosen for the coming year: Dr. C. E. Honstein, president; Dr. John Gasser, vice president; Dr. Duane Hartshorn, secretary, and Dr. F. A. Betts, treasurer.

C. E. HONSTEIN,
Secretary.

* * *

OTERO COUNTY

The November meeting of the Otero County Medical Society was held in Las Animas at the Palace Hotel, Thursday evening, November 10. The following paper was given by Dr. B. F. Jackson of Fort Lyon: "Simplified Ophthalmoscopic Examination for the General Practitioner." This excellent paper was discussed by Dr. M. A. Farnsworth, who has taken over the practice of Dr. W. C. Bennett, formerly of La Junta.

C. E. MORSE,
Secretary.

* * *

PUEBLO COUNTY

"Management of Ureteral Calculi," with report of cases, was the subject of Dr. George Myers' talk at the December 6 meeting of the Pueblo County Medical Society held at the Hotel Congress.

L. L. WARD,
Secretary.

* * *

WELD COUNTY

The regular October meeting of the Weld County Medical Society was held October 3 at the Greeley Hospital. Dr. C. E. Dyde of Greeley gave an interesting and entertaining paper on "Quixotic Medicine."

Dr. Frank B. Stephenson and Dr. Roy P. Forbes of Denver were the guest speakers at the regular

November meeting of the Weld County Medical Society held at the Greeley Hospital, November 7. Dr. Stephenson spoke on "X-Ray Diagnosis of Childhood Tuberculosis," and Dr. Forbes on "Tuberculin Testing."

TRACY D. PEPPERS,
Secretary.

STATE BOARD OF MEDICAL EXAMINERS ANNUAL REGISTRATION NOTICE, 1933

The Registration Fee of two dollars (\$2.00), (or if not a resident of Colorado, \$10.00), required by law of all licentiates of the State Board of Medical Examiners, becomes due on January first of each year and delinquent on the succeeding March first, when the annual directory of Registered Licentiates is compiled according to law.

Failure to pay the annual registration fee within the time above stated automatically suspends the right of any licentiate to practice his/her profession while delinquent. If any licentiate fails for three (3) consecutive years to pay this fee it becomes the duty of the State Board of Medical Examiners without hearing or notice to cancel his/her license subject to reinstatement in the manner and on the conditions prescribed by statute.

The first three consecutive years expire on March 1, 1933. Accordingly, the licenses of all those who have not registered for the year 1930 will be revoked on March 1, 1933.

Kindly send your remittance for the year 1933, payable to the State Board of Medical Examiners, to 422 State Office Building, Denver, before March 1, 1933, when a receipt and your registration card will be forwarded to you.

WM. WHITRIDGE WILLIAMS, M.D.,
Secretary-Treasurer.

WOMAN'S AUXILIARY

MRS. JAMES F. PERCY BECOMES NATIONAL PRESIDENT

In accordance with our national constitution, Mrs. Freeman was succeeded in the office of president by the first vice president, Mrs. James F. Percy of Los Angeles, California. And now since we must turn our eyes forward, as our lost guide, philosopher, and friend would have us do, there comes to you from our new president, Mrs. Percy, a message concerning our future:

To the officers who receive the news-letter and through them all to members of the Auxiliary:

In the great round of Life with its swift changes, it is for us to muster courage, wisdom, and a timely going forward that the momentum of our splendid organization may not stop. With a heroic array of constructive plans to have been presented by our late beloved president to the national board members on November 19, we are now at the place where we must mark time for a few weeks until the activities of the past few months will have been arranged in their proper

place and your officers have a clear picture of our proper status.

We feel that a special responsibility may be asked of the state presidents and their state and county officers in order to integrate the work of the old and the beginning of the new. We are asking and hoping that the state presidents with their officers will assist in this in order that the work may be helpfully done all over the country.

If you do not hear from the standing committees during the interim of a few weeks, you will know that something beneficial to our future stability and usefulness is being worked out. Any Auxiliaries who succeed in speeding up, adding to or stimulating their activities, both actual and possible, will be considered by the national officers, as inhabitants of the "Isle of the Blest."

MRS. JAMES F. PERCY.

NEWS FROM COUNTIES DENVER

The Auxiliary to the Denver County Medical Society held its annual benefit card party on its regular meeting day, Monday, November 21, 1932, at Daniels and Fisher's tea room. The proceeds of this party are used for philanthropic purposes, a major proportion being used as an annual gift to the loan fund of the Colorado School of Medicine.

The party was very well attended, and a satisfactory amount cleared. Part of the success of the affair was due to the generosity of the following firms, who contributed many lovely things to be used as prizes:

Republic Drug Co.
Pencol Drug Co.
Hansen and Hansen Jewelry Co.
The Art Nook.
The Mohanna Shop.
The Piggly Wiggly Co.
Mrs. Stover's Bungalow Candies.

The hostesses were Mesdames Harry Corper, Lorenz Frank, Louis V. Sams, George W. Miel, T. Mitchell Burns, Richard Gilchrist Smith, and A. J. Markley. Mrs. Arnold Minnig was in charge of the party.

In response to the tremendous demand on the Red Cross for articles for the needy, the philanthropic chairman, Mrs. George W. Miel, has taken garments to be made under the name of the Denver County Auxiliary, and beginning the first of the year, members interested will work with her every Friday afternoon at her home.

Already, due to the tireless effort of Mrs. Miel, ninety-three garments, besides ten dozen diapers, thirty shawls, and four dozen booties, have been completed. Considering the short time the Auxiliary has been a member of the Red Cross, this is a tremendous number. During this trying year, there is no better work for the Auxiliaries than to work along with other organizations for the help of the needy.

OTERO

The Otero County Auxiliary meets once a month, and they have decided to give some interesting paper at each meeting. The one for December was "The Conquest of the Sugar Death," the story of the discovery of Insulin. This article appeared in the Ladies' Home Journal for November. Last year, Otero made layettes for the Red Cross, and this year they may confine their efforts to repairing worn garments for the needy. They also hope to be able to have a health talk in each school sometime during the year by some doctor or nurse.

Colorado State Medical Society Officers, 1932-1933

President: Frank B. Stephenson, Denver.

President-elect: Gerald B. Webb, Colorado Springs.

Vice Presidents: First, Walter W. King, Denver; Second, Lawrence L. Hick, Delta; Third, B. Franklin Blotz, Rocky Ford; Fourth, William P. Gasser, Loveland.

Constitutional Secretary: Lorenz W. Frank, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone KEystone 0870.

Delegates to American Medical Association: Senior, Crum Epler, Pueblo; Alternate, J. N. Hall, Denver; Junior, John W. Amessee, Denver; Alternate, A. J. Markley, Denver.

<i>Councillors:</i>	<i>Term Expires</i>
District No. 1 Ella A. Mead, Greeley	1935
District No. 2 G. P. Lingenfelter, Denver	1934
District No. 3 George D. Andrews, Walsenburg (Chairman)	1933
District No. 4 W. W. Crook, Glenwood Springs	1936
District No. 5 A. L. Burnett, Durango	1937

Standing Committees, 1932-1933

Credentials: Lorenz W. Frank, Denver, Chairman; W. A. Campbell, Colorado Springs; Harold T. Low, Pueblo.

Scientific Work: G. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; James J. Waring, Denver.

Arrangements: John B. Crouch, Colorado Springs, Chairman; T. R. Knowles, Colorado Springs; John B. Hartwell, Colorado Springs.

Public Policy: Walter W. King, Denver, Chairman; H. R. McKeen, Denver, Vice Chairman; Edward Delehanty, Denver; Gerrit Heusinkveld, Denver; A. L. Beagler, Denver; W. W. Harmer, Greeley; O. D. Groshart, La Junta; L. L. Ward, Pueblo; A. C. Holand, Colorado Springs; F. B. Stephenson, Denver, ex-officio; L. W. Frank, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

Publication: C. F. Kemper, Denver, Chairman; C. S. Bluemel, Denver; William H. Crisp, Denver.

Medical Defense: W. W. Wasson, Denver, Chairman; C. F. Hegner, Denver; T. D. Cunningham, Denver.

Medical Education and Hospitals: C. N. Meader, Denver, Chairman; K. D. A. Allen, Denver; H. A. Black, Pueblo.

Library and Medical Literature: E. D. Downing, Woodmen, Chairman; Carbon Gillaspie, Boulder; F. W. Kenney, Denver.

Co-operation With Allied Professions: Harry S. Finney, Denver, Chairman; George R. Warner, Denver; John Andrew, Longmont.

Medical Economics: C. E. Cooper, Denver, Chairman; B. B. Blotz, Rocky Ford; Philip Hillkowitz, Denver.

Necrology: G. M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; Lee Bast, Delta.

Special Committees, 1932-1933

Postgraduate Clinics: Maurice H. Rees, Denver, Chairman; O. M. Gilbert, Boulder; C. E. Harris, Woodmen; Nollie Mumey, Denver; G. E. Cheley, Denver.

Workmen's Compensation Affairs: A. S. Cecchini, Denver, Chairman; L. G. Crosby, Denver; W. R. Waggener, Denver; J. D. Carey, Fort Collins; Lanning E. Likes, Lamar; D. H. O'Rourke, Denver; John Andrew, Longmont.

Veterans' Legislation: J. W. Amessee, Denver, Chairman; E. B. Liddle, Colorado Springs; Crum Epler, Pueblo; L. H. Winemiller, Denver; Louis V. Sams, Denver.

Advisory to the School of Medicine: John S. Bouslog, Denver, Chairman; N. A. Madler, Greeley; C. O. Giese, Colorado Springs; C. E. Sidwell, Longmont; T. D. Cunningham, Denver.

State Registration Fee: R. W. Arndt, Denver, Chairman; Frank E. Rogers, Denver; T. E. Beyer, Denver.

Constituent Societies

Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Chrysler, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, G. W. Larimer, Salida.

Crowley County—Second Tuesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, H. I. Barnard, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, R. B. Porter, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, J. M. Lamme, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, Walter C. Keller, Genoa.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—First Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Thursday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, L. L. Ward, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

President, F. L. Beck, Cheyenne

Vice President, J. L. Wicks, Evanston

President-elect, H. L. Harvey, Casper

Secretary, Earl Whedon, Sheridan

Treasurer, Evald Olson, Meeteetse

Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne

Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas

Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

A Real Governor

THE attitude of Governor-elect Leslie A. Miller on medical affairs is outstanding. The officers of the Wyoming State Medical Society have been asked by the Wyoming Governor-elect to submit a non-partisan list of six or eight names of outstanding members of the Wyoming State Medical Society from which he will make his appointments of members of the State Board of Health and the State Board of Medical Examiners.

Never before has our State Society been so honored. The present boards are made up entirely of political appointees and every member is a member of the same political party. The fairness of Governor-elect Miller in removing the political atmosphere from our Medical Boards is most pleasing to the medical profession and to the public. All will agree that there is no reason, so far as public health is concerned, for the political beliefs or activities of any doctor being used as qualifications for his appointment as State or County Health Officer. Just because a man is a good Democrat or a good Republican is no reason he will make a good health officer.

The Governor-elect is right. Politics should not be the reason for appointments. The ability of the doctor should be his only qualification. Leslie Miller is the type of Governor who will cooperate with scientific medicine for the good of the people of Wyoming. We all endorse the idea he is following.

Pay Your State Medical Dues in January

SEND your check for the amount of your County Society dues, and ten dollars, to the Secretary of your County Medical Society this month. If you have no county society—send ten dollars to the Secretary of the State Society before the first of February in order to be in good standing.

During these hard times that amount may seem to some quite a large due, but it is less than one postage stamp a day. For it you receive a year's membership in the Wyoming State Medical Society, a year's subscription to an outstanding Rocky Mountain Medical Journal, and you put away five dollars in a strong Medical Defense department. You help in the great work our State Medical Society is doing—not only for you, but for the good of all the people of Wyoming along modern medical lines. All of this only costs three cents a day.

Every honorable medical man in Wyoming ought to deem it his duty to be a member of his County and State Medical Society. There is but one way to accomplish this and that is by joining and paying your dues. Do it now.



When Winter Comes

FALLING of all the leaves in the Western Country means the coming of winter. To many this suggests cold and snow, but to those brave souls with active thyroids it means a season of enjoyable activity. No longer does the heat of summer depress, nor

that tired feeling restrain them. The mind is more active, the digestion more keen, and the desire to do something pulls at their heart strings.

Winter gives extra time for study, and, as the Indians used to mark the passing of time by the winters, so the medical men of Wyoming look forward to greater accomplishments each year in the winter time.

How much more valuable and helpful our State Medical Society becomes as the winters pass. Then it is that our County Society meetings are better attended. The programs are more interesting, the discussions more keen. As a rule new officers are selected either in December or January and the work for the new year is planned. A fresh start is made.

This fall the Committee on the Costs of Medical Care has made its final report. In many of the medical journals and lay press these reports have been discussed from different viewpoints. All has not been said that can be said on either side of this question, but if the medical men of Wyoming will spend more time in study and less time in worry about state medicine there will be no question as to their future economic security. It is not the man who knows his work that is a coward. There always will be, even in sparsely settled Wyoming, plenty of good work and good pay for the good doctor. He always will be busy. He will have all he can do to the limit of his time and strength. It's the fellow who does not know his work, who is in trouble. To him the medical meetings of the winter time ought to be a Godsend. Only by constantly learning can any of us hope to succeed. Let California have her winter sunshine; God grant us the snap of a Wyoming winter.

THE AMERICAN DELEGATION TO THE SECOND INTERNATIONAL GOITER CONFERENCE

The American Association for the Study of Goiter has arranged for a large representative American Delegation to the Second International Goiter Conference, which is to be convened in Berne, Switzerland, tentatively on August 10, 11, and 12, 1933.

The delegation will be made up of the officers and members of the Executive Council, the members of the Invitation Committee, and geographic

and delegates-at-large of the A. A. S. G., representatives of the leading Goiter Clinics, the National Medical and Surgical bodies of Canada and the United States, and those from the United States Army, Navy, and Bureau of Public Health.

The Committee in charge of mobilization of the Delegation has secured an exceptionally low rate for the voyage on the SS President Roosevelt of \$215.55 from New York to Havre and return. The sailing date is July 26, time for a leisurely trip to Berne, with two or three days for Paris. A return voyage may be made on any cabin vessel of the line by payment of the tariff of the vessel chosen, less the voyage reduction allowed on the Roosevelt-Harding class.

A special feature of the going voyage will be a most attractive and educational round-table goiter discussion program. There will be five or six of these afternoon sessions, each one of which will be conducted by some outstanding man.

Members of the profession in good standing in their state or provincial societies who may wish to join the delegation in an unofficial capacity but allowed full participation in the voyage program and the reduced SS rates may do so by communicating with the Geographic Delegate of their section, any member of the Invitation Committee, or Dr. J. R. Yung, Corresponding Secretary, Terre Haute, Indiana. Proof of society standing will be required and should accompany request for enrollment, which is necessary before booking arrangements can be made with the SS agent in charge of transportation matters. Dr. Frank E. Rogers, Majestic Building, Denver, Colo., is the Delegate for the Rocky Mountain Section (Colorado, Wyoming, Montana, Idaho, and Utah).

Members of the medical profession, interested in goiter, who are contemplating going to Europe in 1933 should not fail to take advantage of this exceptional opportunity.

AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The American Association for the Study of Goiter, for the fourth time, offers Three Hundred Dollars (\$300.00) as a first award, and two honorable mentions for the best three essays based upon original research work on any phase of Goiter presented at their annual meeting in Memphis Tenn., May 15, 16, and 17, 1933. It is hoped this will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in English and submitted to the Corresponding Secretary, J. R. Yung, M.D., 670 Cherry Street, Terre Haute, Indiana, U. S. A., not later than April 1, 1933. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

The first award of the Hamilton, Ontario, Canada, 1932, meeting was given to Donald McEachern, M.D., John Hopkins Hospital, Baltimore, Md., "A Consideration of the Mechanism of Hyperthyroidism based upon Its Effect Upon Cardiac and Skeletal Muscle."

Honorable mentions were awarded A. B. Guttman, M.D., Presbyterian Hospital, New York City, "The Effect of Administration of Iodine on the Total Iodine, Inorganic Iodine, and Thyroxine Content of the Pathological Thyroid Gland," and Lieut. Col. H. Stott, M.R.C.P., I.M.S., Dean Faculty of Medicine, Lucknow University, Lucknow, India, "The Distribution and Cause of Endemic Goiter in the United Provinces."

THE INDUSTRIAL COMMISSION OF UTAH AND ITS RELATION TO THE MEDICAL PROFESSION*

JOHN Z. BROWN, M.D.
SALT LAKE CITY, UTAH

Along with the mighty changes taking place in communication and transportation, changes educational, political, and economic, are corresponding new developments in the demands for medical care. Automobile accidents alone are making traumatic surgeons, so to speak, of our general men, even those who practice in rural communities, and our medical centers are now giving special post-graduate courses to train doctors for this service. For years our country has been growing from an agricultural to an industrial nation, creating at the same time what is known as "industrial medicine," including in some instances salaried medical services.

Added to this is an alarming increase in the numbers of non-medical or "lay" personnel in the field of the healing art (estimated at ten times the number of physicians). These lay people are invading every phase of medical activity: public health, hospitals, industrial work under the guise of welfare societies, as well as in private practice. All this adds greatly to the "cost of sickness."

Fake medical literature and so-called radio health talks provide a fruitful field for quacks and cults to thrive on a credulous public. Communities have less confidence in their political and religious leaders than formerly. The same is true of the doctor. Is it any wonder that the people are bewildered and overwhelmed when serious illness comes?

Because we hold the monopoly on technical information pertaining to sickness and health, we are not popular. The sufferer must come to us. The courts generally and lawmakers in particular are usually hostile. Newspapers are unfriendly because we do not purchase advertising space. Medicine not being an exact science, the sufferer cannot always judge the value of the medical services rendered. Malpractice suits are frequent and difficult to defend. Especially

does the malpractice suit assume an important place in Industrial Medicine, because in all the states the injured workman has had taken from him by law, the right to bring an action in court against his employer, be this employer a mine, a railroad, or a manufacturing plant. Now this is a very important right. This law is justified by society upon the theory that the remedy at law is uncertain, expensive, and hampered by court delays, while working men's compensation is certain. It is immediate in reaching the injured worker or his family in case of death at the time when it is most needed and at little or no expense to him, and further he gets it all. But he can and does sue his doctor. The law is silent here.

It was in 1917 that the working men's compensation law was enacted in Utah. The schedule of fees paid the doctor at that time together with other restrictions imposed, worked a decided injustice to our medical men. Some of the most experienced physicians refused to care of these cases. The injured men complained to the Commission. They also asked to be allowed to choose their doctor. The Commission employed a physician to serve as a referee. He was a political appointee.

Various committees from the State Medical Society met with the Industrial Commission and Insurance Carriers from time to time and after much deliberation, extending over a period of years, our present arrangement was brought about.

The Insurance Carriers and the Commission agreed to an increase in the fees paid physicians provided they could get our best men to serve and at the same time be protected from the unscrupulous doctor who might perchance pad his bill, and also be assured against incompetent services. Here are a few of the listings:

	OLD FEE SCHEDULE	NEW FEE SCHEDULE
Office dressing	\$ 1.00	\$ 2.00
House visit, day	2.00	3.00
House visit, night	3.00	5.00

*Read before the Wyoming State Medical Society, Rock Springs, July 19, 1932. Dr. Brown is Councillor of the Utah State Medical Association.

Fracture forearm one bone	15.00	35.00
Fracture forearm both bones	20.00	50.00
Fracture femur	30.00	100.00
Amputation thigh	40.00	100.00
Laparotomy	40.00	150.00
Herniotomy	45.00	100.00
Enucleation of eyeball.....	35.00	60.00

To take care of this situation, the Utah State Medical Association now furnishes a committee of three experienced physicians which meets with the Commission at the State Capitol every Friday morning. This committee assists the commission in rating the disability, both temporary and total, of the injured man and in adjusting the doctor's fee which might be in dispute. They also are consulted regarding the contention of the Insurance Carrier.

This committee of doctors makes a careful investigation in the presence of all parties concerned. They systematically examine the injured man with his clothing removed. He is weighed and measured and given a thorough physical examination. They listen to his story and study the history of the case including x-ray and laboratory findings furnished by the doctor on the case. They discuss the problem with the patient's physician. The Insurance Carrier presents his side of the case, and after all parties concerned have had their say in the presence of each other, they all withdraw, after which each doctor on the advisory committee gives his conclusions to the Industrial Commission who then make the final decision which is their duty as provided by law.

This committee of doctors serves without any remuneration whatsoever, and as a result their individual findings are not influenced by private fees. They work as a purely unbiased, scientific body, and their services do not cost the injured man, the Carrier, the Commission, nor the State of Utah, one cent. This service is competent, scientific, and confidential. It is strictly professional and is even better than money can buy.

To ease the burden on the profession, this service rotates; each doctor is on duty six months. The oldest man in point of service retires, and a new man goes on every two

months. A competent x-ray man is included in this rotating committee.

Flagrant or unusual cases are appealed to the Council of the State Medical Association, which Council consists of the President, President-elect, and three councillors elected by the House of Delegates. These five men hold a special meeting with the Carrier, the doctor, and the Commission and in like manner iron out the difficulties. So pleased have the state officials been with this service that it has been suggested that the doctors be paid. The profession is of the opinion that if this were done, the service would degenerate into politics and develop a lot of political doctors who would contend for this work as ward-healers do, and the high ideals of our profession be trailed in the dust.

Now what is our remuneration for all this gratuitous service given to the state? We think the increase in fees paid doctors, together with the fact that the injured workman can choose his surgeon and discharge him if his services are not satisfactory, is a decided gain in our present struggle to preserve the personal relationship between the patient and his doctor and to protect the men in our state engaged in the private practice of medicine.

In 1931, the Industrial Commission asked the president of the Utah State Medical Association to appoint a committee to meet with like committees representing the Insurance Companies to revise our fee schedule. As chairman of this committee, I shall give you Wyoming men a brief report of our experience. In order to deal intelligently with this problem, this committee consisting of Doctors E. M. Neher, J. P. Kerby, and myself, wrote to every state in the Union asking for a copy of their industrial fee schedule together with the rules governing the same. We also asked if in their particular states the injured employee is given the right to choose his doctor. Our investigations and deliberations covered a period of some five or six months.

We discovered that forty-two states have workmen's compensation laws. Industrial laws differ in all the states. Many have no

regular fee schedule. One of these, New York, sent us a copy of the schedule of the New York State Medical Society, which they use as a guide. Others such as Tennessee and Texas having no regular schedule permit reasonable charges such as are made for like service in private practice in such communities.

In Kansas there is a maximum fee, and in serious cases special arrangements are made. One of these says that where the expense goes beyond this maximum, the allowance is divided between the doctor and the hospital. This prevents the hospital from getting all the money and the doctor none.

In the states where there is a regular fee schedule with its rules, such have been adopted after first having been agreed upon by a joint committee of doctors representing the State Medical Association and representatives of the Carriers.

A clause in the Virginia law (Sec. 26, page 61), says, "Application for acceptance of compensation is no bar to a suit by an injured employee against the attending physician for malpractice.

"The employer shall not be liable in damages for malpractice by a physician or surgeon furnished by him, but the consequence of any such malpractice shall be deemed part of the injury resulting from the accident and shall be compensated for as such."

In Oregon, Rhode Island, Texas, Wyoming, Montana, and some other states, except where the employer is a self-insurer and approved by the Industrial Commission, the injured employee has the right to choose his doctor. Here I would direct your attention to a recent contract entered into between the Los Angeles County Medical Society and the Metropolitan Water District of Southern California for the care of the employees of the latter organization. This company is building an aqueduct to convey the water from the Colorado River to supply eleven cities. The company has planned to collect from every employee a stated sum per month to provide for medical and hospital care for sickness and accidents not covered by the California Industrial Compensation Act. They decided to give each

employee the privilege of selecting his own doctor from the members of the Los Angeles County Medical Society rather than make a contract with any one doctor or group. The average wage for all employees is \$150.00 per month. A liberal fee schedule with rules provided for the same was adopted. Some items are:

Office visit	\$ 3.00
Residence call	5.00
History and physical examination.....	25.00
Major operations (subject to special conditions)	150.00

Two of their rules follow: 1. "It is understood that the practice of medicine and surgery by each member of the Los Angeles County Medical Association is an individual matter, and this schedule is in the form of a recommendation only to our members. 2. No encouragement should be given to employees to call a physician to treat trivial ailments simple because they have paid a hospital fee."

A vital feature is the fact that the injured employee cannot sue the industrial plans which employs him, but in all the states, if he is dissatisfied with the results of his injury, he can sue the doctor. He cannot sue the welfare agent but can recover damages in the courts from the doctor whom this welfare agent employs on a salary.

With the exception of Virginia, whose statute tells the employee just how he can sue for malpractice, all the states are silent in this matter. In every state in the Union, the profession must provide its own protection in this matter. I wonder if our delegate should present this matter to the A. M. A.

We think that when a doctor accepts an industrial patient he assumes an immediate obligation to make out a complete medical report and promptly forward the same to the Commission. Lack of proper information causes delay, especially in cases that come before the medical advisory committee. I desire to quote Rule 6, which contains a provision of our State Law: "All bills rendered for medical and surgical services to injured workmen will be considered only when all reports required of the surgeon have been duly filed with the Commission and the Insurance Carrier or self-insurer. Failure to do so renders the physician liable

to a fine of \$500.00, as by law provided."

All the sessions of the joint committee were harmonious throughout. The employees, employers, and Insurance Carriers. want competent men to do the professional work and are perfectly willing to pay for such services. They ask us in return that we give careful, honest work, and the committee assured them they will get it.

In Utah we now have a satisfactory working arrangement between the patient, the physician, the Insurance Carrier, and the Industrial Commission.

WYOMING NEWS NOTES

NORTHWESTERN WYOMING MEDICAL SOCIETY

The regular quarterly meeting of the Northwestern Wyoming Medical Society was held in Worland, the evening of November 3, 1932, after a banquet at the Washakie Cafe, which was attended by the doctors and their wives. The following members were present: Dr. Mills of Powell, Drs. Horsely and Croft, Sr., of Lovell, Dr. Myre of Greybull, Dr. Chester Harris of Basin, and Drs. Gray, Nagle, and Read of Worland. There were four visitors present, Dr. E. L. Jewell of Shoshoni, Dr. Carl L. Koehn and Dr. O. T. Nuttall of Gebo, and Dr. Guy W. Taylor of Grass Creek.

Dr. Croft, Sr., as a candidate for the state legislature from Big Horn County, addressed the society on his stand politically. He endorsed the entire list of candidates and platform of the Republican party and promised, if elected, to stand solidly behind the medical profession and the State Medical Society in any legislation pertaining to the medical profession.

Dr. E. L. Jewell, as a member of the State Legislative Committee, stressed the need of a revision of the medical practice act of this state, but stated that the committee had deemed it wise to withhold any definite action until such time as we had enough of a representation in the State Legislature to make certain the passage of any bill we might present. Dr. Jewell noted the progress that is being made towards this, in that we now have four doctors in the state who are running for the State Legislature.

There was also a discussion of the use of a portion of the Medical Defense Fund for the compensating of any doctors who might be elected to the Legislature, and for the use in securing the passage of any medical bill or the fighting of any bill detrimental to the medical profession. It seemed the consensus of opinion that a portion of these funds could and should be used for this purpose. Acting on this idea this society voted to compensate Dr. Croft in the event of his election, to the extent of \$100.00, the money to be raised by a pro-rata assessment of the active members.

Officers for the coming year were elected as follows: President, Dr. J. R. Nagle, Worland; vice president, Dr. F. A. Mills, Powell; secretary-treasurer, Dr. Paul S. Read, Worland.

Obituary

W. W. Yates

Dr. W. W. Yates of Casper died November 10, 1932, at the Casper Hospital.

Dr. W. W. Yates of Casper died November 10, standing eye, ear, nose and throat specialists of Wyoming. He was elected Vice President of the Wyoming State Medical Society in 1930 and also was National Committeeman from Wyoming in the American Legion. For a long time he had been active in the Legion, not only in the national organization, but in Wyoming and Colorado.

He was born July 11, 1868, at Moingona, Iowa. He was married to Minnie Alice Wilson of Dunlop, Ill., August 22, 1895.

Graduating from Rush Medical College in 1902, he practice at Perry and Topeka, Kansas. Later he located in Loveland, Colo. He was Regimental Surgeon of the Seventh Cavalry and the Remount Depot at Fort Bliss, Texas. Dr. Yates was a member of the George W. Vroman Post, American Legion; local voiture, Forty and Eight; American Medical Association, the Natrona County Medical Association, the Natrona Memorial Hospital Staff, and the Presbyterian Church.

The remains were interred at Loveland, Colo. We will all miss this genial gentleman from Casper at our Annual Meetings. He always had a smile and a cheery word for all his colleagues.

E. W.

We are sorry to learn that Dr. J. D. Lewellen of Cody is suffering from a severe streptococcic infection of his hand as a result of a needle prick while operating. His progress at present seems to be satisfactory and we hope for a speedy recovery.

Born to Dr. and Mrs. Paul S. Read of Worland a son, Paul Thomas, on Oct. 7, 1932.

PAUL S. READ,
Secretary-Treasurer.

Tobacco Tar and Cancer

The Pacific Coast Branch of the Society for Experimental Biology and Medicine recently reported at the annual meeting of the American Association for the Advancement of Science that Emil Bogen and Russell N. Loomis have found that tobacco tar, which has been alleged by some advertisers of special smoking equipment to be a potential source of mouth cancer, was wholly inactive in producing cancers under conditions in which gas-house tars of recognized carcinogenic action produced cancers invariably. This investigation indicates strongly that whatever may be the cause of smoker's cancer, the tar present in tobacco smoke is not responsible.—Science, October 7, 1932.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Vol. VI

January, 1933

Number 1

EMOTION that remains bottled up exerts a harmful physiological influence, especially so on the tuberculous person. Unfortunately, he cannot work off his emotions or shift his interest to another scene. The disease itself inevitably brings about emotional strains involving business relationships, breaks in family ties, and financial worries. In his segregation and enforced leisure the patient broods—and his problems become emphasized and distorted. To adjust the patient's state of mind is an essential therapeutic requirement in the "cure." Mary B. Eyre has studied the role of emotion in tuberculosis from the psychological approach. Her findings, presented at the latest annual meeting of the National Tuberculosis Association, are here briefly summarized.

THE ROLE OF EMOTION IN TUBERCULOSIS

The human organism responds as a whole to its internal and external environment. We need not separate mind and body (much less soul and body), but regard the human individual as trying to get along with the use of all of his functions, endowment, and experience.

His functions include not only his feelings, but the use of his brain. Stirred-up feeling is known as emotion, and implicit in emotion is *energy*, which is always dynamic. The individual who experiences emotion is therefore *ready to act*. Researches have demonstrated that the sympathetic division of the autonomic nervous system, through the adrenal glands (and possibly other tissues), prepares the body for activity at the same time that the individual is under emotional stress. If the discharge of this energy should not take place, then the preparatory processes become disturbers and disrupters of the organism.

Each one of us needs at least to feel safe. Anything which menaces our bodily, mental, or financial security, sets up at once a state of tension, which disintegrates our assembled forces in fronting our world. In the weak and timid person, he who has never learned self-reliance or known what it means to think well of himself by reason of success due to his own efforts, *the sense of his inadequacy* is always his first response. To tell him "not to worry" and to "control his emotions," far from helping, usually increases his tension without showing him how to release it. Something detrimental does happen to all responses of the



Optimism, based on confidence, is a therapeutic asset.

individual, through worry; something beneficial takes place as inevitably through the building up of the sense of security. Metabolic rate of plus 124, with pulse rate of 112, was changed to basal rate of minus 3, pulse 72, within twenty-four hours, in an individual whose anxiety over her financial safety was relieved meanwhile.

Of all the emotions, fear seems to be the predominating one. The characteristic optimism which is generally attributed to tuberculosis was found in a number of observed tuberculous patients to be compensatory to an underlying fear and dread of non-recovery, which they resolutely refused to admit to themselves or to acknowledge to others. Is the hopeful state observed in many tuberculous patients due to a specific toxin of the

tubercle bacillus? It is more simply explainable by the defense mechanism aroused by fear, superimposed upon the general biological stimulation which is the body's reaction against this bacillus.

Measuring Emotional States

Even though measures of precision have not yet been evolved for emotional states, it is a step in the right direction to assemble the evidence, and to compare symptoms involving strong feeling, with objective physical findings. Such correspondence can be observed in the physical field, in rise or fall of temperature, in metabolic index, and in functions governed not only by the vegetative nervous system, such as digestion and elimination, but by the sympathetic division of the autonomic as well, including, as Cannon has shown, heart acceleration, respiratory change, pilo-motor reflex, endocrine activity, increased blood sugar and hormone liberation. To these may be added as possible signs, the healing or increase of cavitation, and other reparative or destructive processes of the body, as revealed by X-ray and chemical analysis.

It would seem reasonable to ask of any measures which set out to regulate emotion, that they should prove their validity by producing an effect upon the general bodily well-being of the patient.

Eighty-seven tuberculosis patients were studied. Although a complete comparison with physical symptoms was not made, it would be possible to check the records of emotional behavior with the accurately kept physical histories. The net results of this study, based on the answers to four inclusive questions, were in terms of social adjustment.

Fear was found to be the chief factor in emotional instability, present, to some detectable extent, in all but two instances. One of these was a patient who had been told that as "a light case" she would be ready to go home, as soon as she recovered from an appendectomy which had brought her to the acute unit. Her attitude was quietly relaxed, without tension of any sort, either of marked cheerfulness, stoicism, or depression. It was almost startling to find a patient who felt no need of any form of defense against fear.

No adequate explanation can be offered for changes in temperature which accompany emotional excitement, or its release, other than the relationship between the autonomic nervous system and endocrinal activity. Cannon points out that homeostasis of body temperature is regulated in part by the sympathetic, which also influences the output of adrenal and thyroid and pituitary glands, the governors of muscular tonus, and, indirectly, oxygen intake. Muscular action results

in heat production, which warms the blood; shivering, pilo-motor reflex, and sweating, are all heat regulating devices directed by the sympathetic, which also responds to emotional excitement, of either sudden or long continued duration. Thus the whole mechanism is in such delicate adjustment, that change in any factor could presumably cause imbalance.

Re-Educating the Emotions

Outlets must satisfy the inmost aspirations of the individual, and carry on his energy in channels appropriate to his needs. It is not enough merely to tell him to "work off" his excess emotion. It must be used creatively after his heart's desire, in some fashion.

Dr. Cannon points the way physiologically, by showing the disrupting effects upon an organism prepared by emotion for violent action, if the physical action be deferred or prevented. He stops at that point. The principle can be carried further, to provide adequate means by which the excited organism *can* find use for the energy which it is prepared to expend, through interests fitted to its intellectual level.

To warn a patient against giving way to his feelings, without showing him how to bring about this control, is but to increase his strain; just as to beg him when in great bodily fear, "not to be afraid," usually augments his terror.

Re-education of the patient, in the sense of helping him to understand the sources of his emotional stresses in order that he may know how to re-route their component energy, is the most practical therapeutic aid for the emotional problems of tuberculosis. The individual must first be helped to face his difficulties, and to identify the feeling-habits in himself (usually dating back over long periods) which led to his failure; he must be shown how to substitute new feeling-habits, which will lead to better adjustment; how to rely upon himself, and become emotionally grown up; and finally, how to find adequate constructive outlets for his emotional energy. In bed patients, these outlets must necessarily be through mental instead of physical channels.

Optimism that is based on confidence in the recuperative powers that are within the organism, is a different thing from the defense against fear, and is a tremendous asset which therapeutics cannot afford to overlook. If fear be faced, and not run away from by pretending it does not exist, it can be dealt with adequately.

The Role of Emotion in Tuberculosis, Mary B. Eyre, Trans. of the Nat. Tuberc. Assn., 1932.

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C. S. Bluemel, M.D.
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EDITORIAL NOTES AND COMMENT

*Actions of the National Conference of State Secretaries and Journal Editors**

LAST NOVEMBER, it was our privilege again to attend the annual conference of State Secretaries and Journal Editors at the headquarters of the American Medical Association. The program of this important convocation as a rule embraces a variety of secretarial and editorial problems. However, in 1932, the majority of papers and practically all discussions were upon the questions of economics and public relations now confronting the profession. A resume of the main subjects follows:

Realizing the abuse of the term "specialist," the Medical Society of New Jersey has decided to establish a plan under which it can serve as sponsor to the public for such of its members as it chooses thus to recognize. It requires no legislation; the matter remains within the control of organized medicine—as should all such matters. It interferes in no way with the legal rights of any licensed physician. Qualified specialists are thereby officially known to the public through the proper medical channels.

A State Society Committee, known as the Committee on Credentials of Specialists, is composed of the President, Secretary, Chairmen of the Welfare Committee and of the Board of Trustees, and the First Vice President. Each County Society shall set up a similar Committee on Special Credentials composed of the President, Secretary,

and three elected members. Any member of the Society desiring recognition as a specialist shall apply on a certain form to the Secretary of his County Society who conveys it to the Committee on Special Credentials. The candidate's moral and educational background is investigated. If the candidate is thus approved, his application is submitted to the Secretary of the State Society with recommendations. The action of this Committee is final. Suitable certificates are awarded at the annual meeting of the State Society.

The Council on Medical Education and Hospitals of the American Medical Association has reported that it is ready to begin a similar national plan right after the next annual meeting.

Our national President-elect, Dr. Dean Lewis, made a plea for more bedside and clinical instruction and training in medical schools. He claims that young physicians should learn to depend more on their five senses. They are now entering the practice too dependent upon special diagnostic equipment.

Dr. William Allen Pusey, without offering any solution to the problems with which we are beset, reviewed the basic facts upon which our attitude should be based: The individual physician, caring for the individual patient or family, has given the most satisfactory and economical service in at least 80 per cent of sicknesses. The profession has striven at all times to make its business less by reducing the need for it. In the face of such a history it has the right to maintain a position of authority in

*From remarks made by the Editor at a meeting of Presidents and Secretaries of Colorado County Societies during the mid-winter clinics in Denver, January 19, 1933.

those affairs for which society holds it responsible.

It is a serious matter to overturn the age-old traditions of a profession, to institute new and unproved methods of practice, and establish an entirely new basis of public and professional relations. Modern society seems to dictate some change; it is up to the organized profession to examine such proposals and determine their ultimate value. Such must be made with a view toward retaining unhampered the personal doctor-patient relationship and scientific advancement, all with the utmost regard for the best welfare of the people—anything contrary to this is unethical.

Our national President, Dr. E. H. Cary, raised the following questions: Shall we or shall we not

1. Advocate the Iowa plan for dealing with the indigent.
2. Develop County Society plans of budgeting and financing the medical needs of the unfortunate.
3. Condemn all hospital insurance plans for the care of the sick, especially where free choice of a physician is not possible.
4. Try to establish a different attitude toward veterans' disabilities of non-service origin and demand a repeal of the 202-10 amendment which opens government hospitals to any and every veterans' disability.
5. Limit the number of medical graduates.
6. Fight the trend toward State Medicine.

Inasmuch as few answers to these questions were suggested in any of the papers or discussions, emphasis will later be given such suggestions as were brought forth.

Other speakers discussed the evils of many forms of contract practice: Corporations, business establishments, newspapers, hospitals, and insurance companies may become vendors of medical service—usually with the exploitation of physicians and the people. Free choice of physicians and hospitals is limited. Among physicians, cliques may be created and dissension may develop within the ranks of the profession. The individual practitioner or new graduate may be unable to make a living in communi-

ties where contracts dominate medical services. There may be undignified soliciting or underbidding for contracts. Preventive medicine is often disregarded. There is seldom assurance of competency and efficiency, particularly where there is lay control; the rates usually preclude first class service. Public confidence in the profession is thereby ultimately lost. Particularly in this time of economic stress are physicians apt to waive their allegiance to medical organization and ethics, believing that contracts will bring greater economic security.

The best answer to this problem was brought out in discussion. There are forms of contract work in no way impairing public confidence or professional dignity; others are best suited to the needs of certain communities. Therefore, let the Board of Censors of each County Society be the judge and disciplinarian of all contracts within its jurisdiction.

On the subject of insurance, another speaker suggested that we present a plan for voluntary insurance to a few of the great insurance companies. It is claimed that several are awaiting such a move on the part of the American Medical Association. Dr. William C. Woodward, head of our national legal department, knows that such companies are most likely to sanction, hoping for approval by the American Medical Association, a plan whereby they could employ their own physicians and nurses and maintain their own hospitals for services direct to the beneficiaries.

Insofar as it is possible to draw from this conference recommendations toward solving these problems, the following statements will conclude our observations:

The opinions of a deplorably large number of physicians are based upon a medical economics publication which finds its way monthly to the desk of almost every physician in this country. It is edited by the president of a gland extract organization whose products are not approved by the Council on Pharmacy and Chemistry. It promulgates signed statements from none less than former Presidents of the American Medical Association and publicity agents

for state medical associations who should know better. They endorse contract practice and at least certain phases of state medicine. Such propaganda competes with legitimate information in our national and state journals. Therefore, our members should consign such publications to the waste basket and mould their opinions through official sources.

Likewise, the public receives its information through the many familiar blatant commercial channels. We do not familiarize the public with our ethics, ideals, or economic questions. Naturally, erroneous conclusions are drawn by the people who know not that our efforts are in their behalf. Suitable publicity along lines of health education should be one of the major activities of medical organizations. After all, public opinion will be the court of last resort and will ultimately answer our problems. It is for us, then, to guide it advisedly.

If offensive corporate or contract practice is to be effaced, we must offer a better service commensurate with paying ability of our clients. The corporations or physicians violating our code of ethics must be acted against directly by the County Society. It is their local problem, and disciplinary measures are in their hands. It is through imperfect organization that leadership in constructive policies has not yet been developed. Such would have forestalled much unwise legislation now confronting our law-making bodies.

Medical organization is against any scheme which will jar the foundation upon which we stand. It must sponsor well-directed contact, officially and unofficially, with representatives of lay organizations. Every County Society should have a Public Relations Committee for the furtherance of mutually helpful conferences with lay groups.

Our first step is, therefore, a re-animation and rebuilding of County Societies. They will not strengthen if somebody else does their work. It will require work which involves every officer, committee, and member. The County Societies have been neglected in favor of selective subsidiary, independent, and semi-social groups. So long

as many members thus dissipate their loyalty, so they are contributing to the weakening of the fundamentals of medicine in the United States.



The Midwinter Clinics

OVER two hundred physicians and clinicians from all corners of Colorado and from adjoining states enjoyed the Midwinter Postgraduate Clinics sponsored by the Colorado State Medical Society. Excellent programs at four institutions, the Colorado and Denver General Hospitals, National Jewish Hospital, and Children's Hospital, occupied three days.

These clinics are separate and distinct from those held in the spring by the University of Colorado School of Medicine and Hospitals.

The enthusiasm and satisfaction expressed by our guests and local physicians may aid in making this an annual activity. The program was planned to feature practical information and modern methods especially of interest to the general practitioner. We are indebted to the Committee and clinicians for their splendid efforts.



Your Membership Is Vital

FRATERNAL orders, social societies and sporting clubs have suffered decreasing memberships during these trying months. Physicians are bearing their share of the fate which has befallen the business world. However, our profession may be proud of its stability. We are besieged on all sides by forces which would disrupt the practice of medicine. Individually we are powerless against them; organized, we can protect ourselves.

The officers and committeemen of national, state, and county medical societies are grappling earnestly with the problems which have beset them. Organized efforts are indispensable to success; each individual membership is essential to the organization.

Watch these columns for accounts of the vital activities which will ensue in this crucial year. Above all, hold fast your membership.

A Move to Limit the Production of Physicians

FOLLOWING the publication of a paper entitled "The Economic Status of the Medical Profession," in the Journal A. M. A., October 15, 1932, the secretaries of all the County Medical Societies in Georgia were asked to present the following resolution and request its adoption:

RESOLUTION

Whereas, The medical profession of the United States is suffering losses all out of proportion to its ability to endure; and,

Whereas, Our losses are not so much due to the financial depression as to over-production of doctors and decreased demand for paid medical service generally; and,

Whereas, The production of doctors is far in excess of the population increase.

Therefore, We, the members of the County Medical Society respectfully request the Medical Association of Georgia, the other state medical associations, the Southern Medical Association, and the American Medical Association to adopt this or similar resolutions, requesting the medical colleges of the United States to reduce the number of graduates each year until the law of supply and demand has been fully complied with. The number of graduates shall be determined by a national committee appointed by the President of the American Medical Association.

These resolutions will be placed in the hands of the delegates to the American Medical Association at its next annual meeting.

This action represents an interesting response to the general knowledge that some of our grievances are the direct result of an overproduction of physicians.



Nobel Prize in Medicine

THE NOBEL PRIZE in medicine for 1932 was awarded to Sir Charles Scott Sherrington of Oxford and to Professor Edgar Douglas Adrian of Cambridge. The work of the former on nerve activity has been recognized on several occasions in the past. The latter has made investigations on nerve

conduction mechanism by amplifying and measuring the currents in nerve fibers through the methods of modern radio.

Four other Nobel Prizes—in literature, peace, physics, and chemistry—share the income of the Nobel Foundation. In 1930, it amounted to something over \$40,000.



Pay-the-Hospital Plans

IN THE discussion of an experimental innovation for the treatment of workers at nominal annual cost, an editorial in the Delaware State Medical Journal mentions points for and against the plan.

Favorable to such a scheme are lowered cost to the patient, increased bed occupancy, and greater possibility of the physician being paid. They obviously are immediate effects.

The ultimate effects are more far-reaching and are against the plan. It places the hospital in the position of seeking patients in a commercial fashion. Also, it is but a stepping stone toward a similar pay-the-doctor plan.

As we see it now, surely a superior solution to the problem would be voluntary individual or group insurance whereby the patient chooses his physician and hospital and is provided with reasonable funds for both.



Vaccine Treatment of Pertussis

THE Denver City Health Department and Visiting Nurse Association have compiled figures upon results obtained in the vaccine treatment of whooping cough. The study, covering the months of March through June of 1932, indicates excellent results. Seventy-eight children of the low economic group were treated. Of these, fifty-two showed diminished symptoms during a twelve day period while six doses were given; 68 per cent showed a loss of the chief symptoms. In only ten cases was there some increase in severity.

Any therapy which will minimize the distressing symptoms and complications of this disease should be encouraged.

A DISCUSSION OF SOME RECENT ADVANCES IN THE COMMONER NERVOUS DISEASES*

THEODORE H. WEISENBURG, M.D.
PHILADELPHIA

The subject of brain tumors will be considered first; it is always of interest. Modern brain surgery is a recent development. Thirty years ago the removal of a brain tumor or an operation for the relief of tic douloureux was looked upon with considerable misgiving, for the mortality was about 80 per cent. The enormous strides which have been made are well illustrated in the recent monograph of Harvey Cushing, who in a report of 2,000 verified brain tumors, gave the mortality rate in the last three years in the more favorable type of brain tumors as just a little under 10 per cent.

The reason for this advance is threefold: better diagnostic methods, improved surgical technic, and use of mechanical measures, particularly air injection. Furthermore, during the operation the pathologist is able by a quick method of examination to inform the surgeon of the nature of the lesion, and because of such knowledge the surgeon is able to guide himself as to the advisability of removal of the lesion, a procedure which would have been impossible five years ago.

On the other hand, it is important to emphasize that tumors and other lesions of the brain are usually of slow growth and are characterized by the symptoms of increased intracranial pressure, such as headache, nausea, vomiting, choked disc, and by the specific symptoms depending upon the location of the tumor and that better surgical results could be obtained if lesions were recognized earlier.

Malignant Hypertension

Recently cases of malignant hypertension, particularly in the young, have been misdiagnosed as brain tumors and were operated upon. Such cases are difficult to diagnose in the beginning because there is

an absence of evidence of renal disease or of generalized arteriosclerosis, but in practically all of them there is a marked increase of intracranial pressure, sometimes as high as 300 to 400 mm. of water, and the blood pressure may run from 150/90 to about 356/120, as in some of the cases that we have been studying. Because of this increase of intracranial pressure there is usually headache, vomiting, and choked disc, sometimes as much as 5 diopters. Occasionally there are convulsions. Operation is invariably fatal. Air injection cannot of course be done because the high intracranial pressure contraindicates such procedure. Later on in the disease the evidences of hypertension become obvious.

Epilepsy

In spite of the great amount of work that has been done to find the cause and cure of this disease, very little real advance has been made. The diagnosis, particularly in children, is not very easy. It should be less difficult, however, if it is remembered that so-called minor attacks justify the diagnosis just as much as major attacks and that the diagnosis of epilepsy depends not upon a movement but upon an impairment or loss of consciousness. It is also important to remember that in patients with major convulsions, if a search is made, a history of minor attacks is always to be found. In the many cases of epilepsy which I have studied I have never seen a real epileptic who did not have major as well as minor attacks. In fact, the prognosis in patients with a predominant number of minor attacks is frequently graver than in the more severe type of seizures.

It is particularly important to diagnose the convulsive disorder as early as possible in children. In a recent paper, Peterman demonstrated that certain diseases peculiar to childhood are the direct causes of most of the convulsions. While some children may be said to be particularly susceptible to the convulsive state, his study indicated there is usually a physical basis

*Read before the Sixty-second annual meeting of the Colorado State Medical Society at Estes Park, September 8, 1932. Dr. Weisenburg is Professor of Neurology, Graduate School of Medicine, University of Pennsylvania, and Editor-in-Chief of Archives of Neurology and Psychiatry.

for this susceptibility, that is, spasmophilia or epilepsy which is amenable to treatment. Most of the convulsions in newborn infants are due to acute infections or to cerebral birth injury. In later infancy they are due to spasmophilia and in childhood to idiopathic epilepsy. A basic cause may be found in most cases.

It is important to remember that convulsions in childhood are not caused by worms, teething, or toxemia, and that in every instance where convulsions are present a thorough examination must be made in the search for a cause, for every convulsion produces a certain amount of cerebral injury and lowers the threshold for subsequent seizures.

Regarding treatment, it is most important to find the cause and if possible eliminate it. This requires, as has been indicated above, a most thorough and painstaking study. After the epileptic habit has been established, various methods may be tried depending upon the type and frequency of the attacks. If such seizures occur only rarely it would be folly to give medication. Where the attacks are frequent, different drugs may be used. I have had under my observation a druggist for the past twenty-five years. This man has been taking five grains of sodium bromide each morning. If by any chance he does not take this he will have an attack. Another good drug is phenobarbital, but here again it must be used with caution. It is wise frequently to interchange the use of bromides with phenobarbital.

Many new dietary methods have been advocated, such as the ketogenic diet. This is sometimes of use in certain selected individuals.

More recently the dehydration method has been advocated. This consists in the giving of a minimum amount of liquids. The treatment is difficult to apply and reports so far have indicated that the procedure does not give any better results.

Frequently the supervision of the life of the individual is sufficient to bring about a cessation of attacks. The important thing to bear in mind is that in the treatment of

epileptics the whole life of the individual must be under control.

Narcolepsy

This disease is characterized by an untoward tendency to sleep and is frequently accompanied by loss of power, particularly in the legs. In a patient of this sort, the foreman of a gang, a powerful individual who was accustomed to swear and beat his men when the indications warranted, he suddenly found that whenever he became enraged he lost power in his legs and went to sleep. At times he would go to sleep while standing up. I have another patient, a married man and physician, who after an altercation with his wife not only has an uncontrollable desire to sleep, but also loses power in his legs. Since the beginning of this symptom, any emotional upset brings about similar manifestations.

This disease is very well known and is amenable to treatment under thyroid and pituitary medication. It sometimes comes on independently, but in recent years many such instances have followed encephalitis.

Syphilis

I shall confine my remarks to syphilis of the nervous system. I have been sufficiently long in the practice of medicine to have been able to follow the benefits of different types of arsenical treatment. I remember the introduction of the use of salvarsan, when it was supposed that one injection would cure the disease. There has been an interesting return to the use of the old-fashioned mercury and iodide treatment, because it has been found that arsenicals have not been of as much benefit as it was hoped. Fever therapy has more recently been in vogue. One of the chief reasons for the decline of the use of arsenicals has been the method of its use.

There have developed in recent years so-called syphilis specialists. Usually they have been skin specialists who treat every type of syphilis, that is, syphilis of the eye, of the nervous system, of the internal organs, and so on. It is obvious that no syphilologist can be a specialist in all these different branches of medicine, and as a consequence the treatment of syphilis has been unscientifically conducted for there has been no

adequate checkup. It was therefore inevitable that this method of treatment should fall into disuse and that each specialist is now rightfully treating his own particular subjects. This is as it should be.

So far as therapy is concerned, the neurologist has an unfailing guide in the type of treatment to be employed by the information obtained through spinal puncture. A patient with dementia paralytica will obviously need a more intensive type of treatment than an individual with a lesser type of involvement. By and large the arsenicals are not of as much use in neurosyphilis as they are in other manifestations of the body, but the skillful neurologist will use whatever type of treatment he has at his command, for frequently where bismuth or mercury may not give results, tryparsamide will, or vice versa. Fever therapy is of the greatest use in dementia paralytica.

On the other hand, there is a type of syphilitic involvement of the nervous system in which no treatment of any character should be given; that is, there are individuals in whom the symptoms of neuro-lues develop gradually over a period of years and in whom treatment will at once break down the resistance that has been built up and cause a sudden increase of symptomatology. Such cases can be diagnosed not only by the slow development of the symptoms, but by the nature of the spinal fluid reactions. In such cases the cell count is usually very low, the Wassermann reaction may be negative or not very profound, and the gold curve is more or less flat.

The diagnosis of neurosyphilis should not offer much difficulty, particularly if it is remembered that in every patient with a luetic involvement of the nervous system there is always present an irregular pupil. I do not mean to imply by that that every patient with syphilis has an irregular pupil, but what I do wish to emphasize is that it is not possible, in my judgment, to have a syphilitic involvement of the nervous system without an irregular pupil. This is always present, whereas the spinal Wassermann test may frequently be negative.

Infantile Paralysis

This disease is not so common in this

part of the country. It is common in the east where there is an epidemic at the present time. In 1916 there was a very large epidemic in the east, and it so happened that I had charge of the Philadelphia epidemic at that time, and studied 717 patients. The premonitory and early symptoms were typical; that is, they were the usual symptoms of an infection with fever running to about 102° F.; there was always some pain and rigidity in the back of the head and neck, and pain in the arms and legs. Almost always on the second or third day of the fever there developed a loss of power which came on gradually. The fever usually subsided in the course of three or four days, but the pain generally persisted. The paralyzed limbs could always be recognized by the fact that there was pain on pressure. Non-paralyzed limbs did not have pain. Spinal puncture always showed an increase of fluid with an increased cell count, usually no more than about 100 in a field. Spinal puncture always diminished the symptoms. Very few patients died. In those that did, the cause was nearly always an implication of the respiratory center in the medulla.

We followed many of these cases over some years and found that the best treatment, at least in the acute stage, was a spinal puncture followed by a long period in bed. It must be remembered that in this disease the pathology is chiefly in the cells of the anterior horn of the spinal cord. Those cells which are completely destroyed never recover their function. On the other hand, there are many cells which are only partially injured. Each anterior horn cell represents a peripheral muscle fiber. It is rarely that all the cells representing the fibers in a muscle are implicated, and as a rule only a part of a muscle is diseased. It is obvious therefore that if a muscle is used which is only partially paralyzed that the part of the muscle which is diseased cannot offer any resistance and therefore is stretched, and contractures result. Patients should be kept in bed and their muscles kept in a neutral position. Splints should not be applied except to prevent deformities. On the other hand, massage and electricity

should be applied as soon as the pain disappears.

Just as in epilepsy, so in this disease we have been unable to find the cause or the methods of transmission. Studies of recent epidemics, however, have shown that frequently in the families of the afflicted there occur simultaneously with the onset of the disease, minor colds and gastro-intestinal infections, whereas in a study of the non-infected families in the same area no such manifestations have been found. This implies that there are so-called minor attacks which may or may not have a relation to infantile paralysis.

Lead Infection in Children

Children who are allowed to play with toys painted with lead frequently have lead poisoning. Sometimes the lead has its origin in the painted walls of the room or in the rouge used by the mothers. This infection sometimes causes encephalitis. This condition is mentioned because of its importance

Pernicious Anemia

It is becoming increasingly recognized that pernicious anemia may be first manifested by implication of the nervous system. The symptoms usually consist of an increasing numbness in the hands and feet, gradually followed by difficulty in walking, and an examination demonstrates disturbance of sensation in the legs, particularly of vibratory sense, with loss of reflexes. A diagnosis of tabes is usually made. In such instances, however, spinal puncture shows a negative serology. On the other hand, examination of the gastric contents shows an absence of free hydrochloric acid in about 95 per cent of such cases. Early in the disease, the differential blood count will show nothing, and yet with the increase of the disease process the blood changes are gradually manifest. It is important to recognize that pernicious anemia may be present without blood changes and the earlier liver therapy is instituted the better results will be obtained.

The Psychoneuroses

Most physicians as well as neurologists spend much of their professional time in the treatment of psychoneuroses. This group is probably more mishandled than any other

that comes to our attention. The reasons are various. To many physicians they are a nuisance because they are time-consuming. The constant reiteration of symptoms frequently grows wearisome. That physicians have made a mess of their treatment there is no question, for if they had been properly handled the cults of Christian Science, osteopathy and its derivatives, and the various psychotherapists would never have developed.

What is the reason for all this? The answer lies in the failure of proper diagnosis and in their treatment. To begin with, when a patient comes to a physician and pays him for his services, it does not help the patient to be told that there is not much the matter with him or to be given some kind of pacifier, for invariably such a patient unless properly handled will go elsewhere for advice and gradually drift into the various cults mentioned above, for after all, if a patient comes to a physician complaining of various pains or fears, although the physician on examination finds no apparent cause for them, the patient must be treated, for it is an insult to a patient's intelligence to be told that he does not have the symptoms from which he has been suffering.

The basis, of course, of all successful treatment consists first in the proper diagnosis. This is not always easy. In fact, there is nothing more difficult than the proper evaluation of psychoneurotic symptoms. As an example, in my clinic we recently gathered together a group of cases all of whom had been referred to us as psychoneuroses. In each instance organic visceral disease was found to be the underlying cause ("Neuropsychiatric Counterfeits of Organic Visceral Disease." T. H. Weisenburg, J. C. Yaskin, and Henry Pleasants, Jr. J.A.M.A., Dec. 12, 1931; Vol. 97; pp. 1751-1756). In this group we found cardiac disease, pulmonary disturbances, various types of gross intestinal disorder, genitourinary diseases, and pelvic disturbances.

We gathered these cases together purposely to illustrate a number of points. Most of the errors were the result of faulty and incomplete examinations. Many instances

of organic disease, such as myocarditis and carcinoma of the abdominal organs, failed to reveal in the early stages trustworthy organic manifestations. In some cases the underlying causes, such as some focal infections, are illusive and difficult of demonstration. An important factor is the assumption of the presence of psychoneurosis because of the richness, bizarreness, and variability of "functional" symptoms which make further investigations seem unnecessary.

In the consideration of visceral disease, attention must be given to its rich sympathetic and parasympathetic innervation and that the vegetative system is under the control of the nervous system. In addition, Cannon has shown that under the influence of emotions there is a chemical change which influences the activities of the various viscera. Furthermore, changes in the emotions are known to occur particularly in heart and gastro-intestinal diseases. In fact, some recent contributions would seem to indicate that gastric and duodenal ulcers may be the result of a disease of the mid-brain or the diencephalon. The latter theory is rather far fetched, but it is mentioned as an indication of the extent of some recent points of view.

The above factors force the conclusion that in every patient certain procedures should be followed:

1. Every case should be considered from the standpoint of personality make-up with reference to heredity, early development, school and vocational record, sexual and marital factors, social and economic adaptability, and the individual's reaction, at various periods, to environmental conditions. The latter includes disease, injury, and mental and physical storms.

2. A careful history, especially the chronological development of the symptoms, should be obtained from the patient. The assistance of relatives or friends may be needed. Additional valuable information is frequently obtained in re-examination.

3. Every case should receive a complete somatic as well as neurologic examination. In every case urinalysis, complete blood count, blood chemistry and blood Wassermann tests should be made.

4. No special examination should be made until the physician has obtained a view of the total situation—of the formulation as to what possible physical and psychic changes are present in the patient with the particular makeup. This requires a psychologic evaluation of the case—a difficult and often time-consuming method.

5. Everyone seems to agree that no case should be diagnosed as a psychoneurosis until all indicated investigations are completed. Some insist that a diagnosis of psychoneurosis should always be one of exclusion. This, like blind faith in laboratory procedures, has its disadvantages. In some cases certain avoidable surgical procedures, especially in the nasopharynx and abdomen, only tend to accentuate the already existing vicious circle; and, lastly, it is felt that in competent hands neuropsychiatric manifestations can be evaluated on their own merits. This requires time-consuming, repeated interviews. Special examinations, therefore, are best directed when the neuropsychiatric investigation justifies them. When doubt exists, however, the patient is justifiably subjected to investigations.

6. From the standpoint of neuropsychiatry, every disease must be considered as having both a somatic and a psychic component. These two components are indivisible and should be evaluated in their relation to etiology and to the total situation. With this broad psychologic point of view, errors in diagnosis may frequently be avoided.

A word as to physiotherapy: For many years I have been on the staff of the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases. The neurological part of this hospital was founded by S. Weir Mitchell. The rest cure originated here. It was here that Mitchell first standardized the use of massage, electricity, and hydrotherapy. More than fifty years ago, in publishing the results of his work, he stated that he was loath to give it to the medical profession for he was afraid that they would not take advantage of it. He was right in his prognostications. On the other hand, the various cults did, and made the most

of it. It was not until about five years ago that the American Medical Association created the Council on Physical Therapy. Since then the Association has done its utmost to standardize the use of physical therapy methods and to popularize its use. It is a sad commentary upon the progress of medicine that such an interval should have elapsed. Even today many physicians are unaware of the fact that the various methods of physical therapy have an actual therapeutic value apart for the psychic influence. The great success that Mitchell had was based not only upon the methods he employed in the establishment of a diagnosis but in the use of physiotherapy, for it is a

common experience that many patients who come into the hospital for treatment are so benefited at the end of a month or six weeks by the rest and physiotherapy that about half of their psychic complaints disappear at the end of that time. Not only that, but during the course of treatment the physician is given the opportunity to investigate the psychic element which plays such a large part in the creation of symptoms. In a way Mitchell was the first psychoanalyst.

In my judgment every physician should use the different physiotherapy methods, for they are a great help in the re-establishment of health. After all, that is what all physicians seek.

THE TREATMENT OF BURNS*

N. A. MADLER, M.D.
GREELEY

That burns are of concern to the general practitioner in a rural community as well as to the industrial surgeon of the city is evidenced by the fact that, during the past two and one-half years, forty-one burns of a serious nature were admitted to the Greeley Hospital. The use of kerosene and gasoline in starting a fire in the stove was the cause of the accident in 25 per cent of the cases admitted. In 62 per cent of the cases admitted to the Children's Hospital of Michigan during the past three years, the burn was due to someone leaving a pail of hot water unprotected, the filling of a bath tub with hot water and the child falling into it, or to a child pulling a kettle of hot liquid from a stove. The third most important causative factor is playing with matches or around a bonfire. Twenty-five per cent of the cases admitted to a Children's Hospital in Minnesota, as reported by Davidson, were of this nature. It would seem therefore, that much remains to be done by physicians and public health organizations in the education of the public, particularly in the education of parents in the prevention of burns. Chevalier Jackson and his co-workers have done much in preaching the

gospel of prevention in relation to the aspiration and swallowing of foreign bodies by children. We can, and should, do as much in teaching the prevention of burns.

A burn is a wound and should be treated with the same aseptic precautions. The reaction of the tissues to the causative insult is the same in either case. The area of erythema surrounding a burn corresponds to the area of congestion about a wound. The blisters caused by a burn may be compared with the exudate of a wound. The charring of the tissues as the result of a severe burn may be compared with the necrosis of a wound, and the suppuration in either case is due to the same organism.

Profound metabolic disturbances follow a severe cutaneous burn. Of the various theories propounded as to the etiology of these changes, the one advanced by Davidson that the changes are due to the absorption of a toxin originating at the site of the burn, is the most plausible. The clinical picture is that commonly seen in shock and in small intestinal obstruction. There is blunted sensibility, cold clammy skin, rapid and thready pulse, and lowered blood pressure. There is a marked decrease in the urinary output, and the blood shows an increase in nitrogen and creatinin. In fatal cases the post mortem findings are marked

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degenerative changes in the liver, spleen, and kidneys, and edema of the lymphoid tissues.

Of first consideration then, in the treatment of a severe burn, is the emergency treatment or treatment of shock. While it is obviously unnecessary to treat all burns as an emergency, the fallibility of judgment as to what constitutes a severe burn is so great that it is far better to err on the safe side than to allow one serious burn to be neglected. Glover states that "even with a fairly large experience with burns we find it quite impossible to estimate with any degree of accuracy at the outset the extent and depth of a burn. All too frequently a burn in a child is treated by means of some ointment in the home by a physician who regards it as a trivial affair until the second day when the child begins to vomit and have convulsions. The child is then rushed to the hospital at a time when effective treatment may be too late to avoid a fatal issue." They believe that the toxic products of the burned tissue absorbed within the first few hours after the burn determine the outcome of the case in all burns of a severe nature.

Anyone who has had anything to do with the daily dressing of a severe burn with ointments can testify to its time-consuming and nerve-racking procedure. It is exhausting to the attendants as well as painful and exhausting to the patient. In 1925, Davidson, of the Ford Hospital in Detroit, advocated the use of a solution of tannic acid as a local application in the treatment of burns. He showed that absorption of toxins and loss of body fluid was prevented in the formation of a coagulum by the precipitation of the devitalized tissues with tannic acid. The extensive literature published on the subject which has made its appearance since that time testifies to the widespread adoption of this method of treatment. Aside from being practical, economical, and comfortable to the patient, of greatest interest is its effect upon mortality statistics. Glover, of Cleveland, reports a reduction in mortality from 14 per cent treated by various methods to 9.6 per cent by the tan-

nic acid method. Harris, of Toronto, reports a reduction from 26.6 per cent to 12 per cent; Herzfeld, of Edinburgh, reports a reduction from 38 to 9.5 per cent; Beckman, of New York, 27.8 to 14.9 per cent; and Bancroft and Rogers from 41 and 51 to approximately 20 per cent.

It may be said then that the treatment of burns resolves itself into the treatment of the various stages of the clinical course descriptive of the underlying pathology at any given time. The patient who has been severely burned should be immediately put to bed and morphine given by hypodermic to relieve the pain. Heat loss is prevented by placing him under a covered cradle in which enough electric lights have been placed to maintain the temperature at 85 to 100 degrees Fahrenheit. All clothing and dressings should be removed, and if any oil or ointments have been applied to the burned surface, they should be removed with ether. All blisters which have formed, as well as those which might subsequently form in the course of the first day, should be opened with sterile scissors under aseptic precautions. All the loose layers of skin should be cut away, and all gross dirt in the wound should be removed. During the course of this procedure all unnecessary roughness should be avoided as being productive of increase in shock. Gentleness will obviate the necessity of general anesthesia in most cases.

An aqueous solution of tannic acid is then applied, 10 per cent in adults and 5 per cent in children, being sprayed over the burned area with an atomizer. The stronger solutions are preferable to the $2\frac{1}{2}$ per cent solution, originally recommended by Davidson, because with the stronger solutions quicker tanning of the burned tissues is obtained. The more quickly this is done the less toxins are absorbed. The tannic acid spray is not applied to the face. Instead, a 5 per cent tannic acid jelly is used after vaseline or petrolatum has been applied about the eyelids, nostrils, and lips, to prevent them from becoming uncomfortably dry and stiff. The tannic acid solution is sprayed over the burned area every hour

during the first twenty-four hours. If at the end of that time the burned area is well tanned and dry, no further application of tannic acid need be made, and no further treatment of the wound is necessary for several days. During this time the entire burned area is exposed to the air. Sterile towels or sterile sheets should be used to keep the burned part from coming in contact with the bed.

If an atomizer is not available for use in first aid, the tannic acid solution can be applied in the form of wet compresses, reinforced with a generous layer of absorbent cotton. Tannic acid solution is unstable and therefore cannot be kept on hand as such. However, since the dry powder can be kept indefinitely, a sufficient supply can always be carried about in the medicine bag or kept in the medicine chest for emergency use, and as it is very soluble the making of a 10 per cent solution, 10 gms. to 100 c.c. of water, is only a matter of a few moments.

Hand in hand with the local treatment goes the constitutional treatment, the most important phase of which is the administration of an adequate amount of fluid to combat the dehydration. In an adult, not too severely burned and not vomiting, an adequate amount of fluid can be given by mouth, but if he is vomiting, or in children, the fluid is best given as normal saline or a 5 per cent solution of dextrose intravenously, subcutaneously, or into the rectum. From 2000 to 3000 c.c. per day should be given, or as Glover states, 100 c.c. per kilogram of body weight. He, however, advises caution in the use of too much fluid, as during the first forty-eight to seventy-two hours following the burn the patient is not able to handle as large an amount of fluid as was formerly believed, and a generalized edema may be produced.

Following the initial rise in temperature, which usually occurs during the first forty-eight hours, the temperature drops to normal or only slightly above normal and remains so for the next five or six days. During this time the patient is fairly comfortable, is spared the painful dressings required by other forms of treatment, and in many in-

stances requires no sedative other than the initial dose of morphine.

Now begins the second important stage in the treatment of the burn. At the end of the fifth, sixth, or seventh day exudate begins to form beneath the crust, as evidenced by a rise in temperature, a sense of fluctuation at some point beneath the leathery skin, malaise, and in some cases delirium. If left untreated, many of these patients would die. To loosen up the crusts and release the exudate, Dakin's solution should be applied in the form of thick rolls of wet gauze directly over the fluctuating area. Preceding this the normal skin should be well covered with sterile vaseline to protect it from the irritating action of the Dakin's solution. Oiled silk bandages over the wet dressing will prevent evaporation. The dressings are moistened several times a day and changed once daily. The dressings are continued until the crust is all off and granulating areas are clean and ready for skin grafting or are healing rapidly from epithelial islands not destroyed by the burn. If the burn was not a severe one, the crusts will be off in from three to four days. Deeper burns require from one to two weeks. During this time the patient exhibits the symptoms of a mild infection, a "picket fence" temperature often as high as 102 degrees, malaise, headache, and a general feeling of discomfort. The daily dressings are not painful if well moistened before they are removed. The clean granulating area can be kept free from infection by the daily application of dichloramine-T while awaiting the removal of the crust in the neighboring area and before skin grafting, should that be necessary.

Something should be said in explanation of the use of wet dressings to loosen up the crusts, in view of the fact that Davidson and others condemn the practice. They insist that the crusts be left intact until they separate spontaneously, releasing the exudate when necessary by cutting channels through the tanned skin with sharp pointed scissors. They contend that to soften the crusts again releases the toxins tied up in the coagulum, thereby defeating the very object and merit in the treatment. However, Glover and

his co-workers, in defense of the use of wet dressings, state that from their interpretation of the clinical state it is their belief that the true toxic stage of a burn is over at the end of the first forty-eight hours and that the symptoms exhibited by the patient during the time the crusts loosen up are the symptoms of a mild acute infection, or sapremia, a "secondary toxic stage." They have not had a death during this stage in their long "tannic acid series," and it is their belief that the unfortunate results obtained by other workers who used this method were due to the absorption of boric acid when used in large quantities or to the low bactericidal power of boric acid and other solutions used. As soon as exudate can be detected under the crusts and the patient exhibits the symptoms of infection, the crust should be loosened up as quickly as possible. This can best be done by the use of Dakin's solution which at the same time admirably controls the symptoms of this so-called "secondary toxic stage."

Following the removal of the crusts, skin grafting when necessary should be resorted to promptly, especially with children, as they tolerate granulating wounds very badly. It is during this time that many patients exhibit a profound state of anemia and exhaustion, and unless relieved by early and timely blood transfusions, they either succumb or become the victims of serious secondary infections.

It is also during this stage that deformities should be guarded against. In an extensive burn about the chest and neck, a pillow should not be allowed under the head, thereby preventing shortening of the anterior muscles of the neck resulting in chin-chest adhesions. Deformities of the hands in children, so exceedingly common, are in part avoidable by proper splinting and the careful maintenance of separation of the fingers to prevent webbing. Arm-chest adhesions in burns involving the axilla can largely be avoided by keeping the arm in abduction during the entire period of healing.

Summarizing the results obtained in the treatment of burns with tannic acid, it may

be stated that the mortality has been reduced from one-half to one-third, the period of morbidity has been mitigated and shortened, the incidence of septic complications has been reduced, the method of treatment is practical and economical, and relative comfort during the administration of treatment has been secured for the patient.

REFERENCES

- ¹Glover, D. M.: *Surg. Gyn. and Obst.*; 1932. LIV-798.
- ²Robinson, C. C.: *Journal Indiana Med. Ass'n*; 24:652; December, 1931.
- ³Berkow, S. G.: *American Journal of Surg.*; 11:315, February, 1931.
- ⁴Donald, Charles: *The Lancet*; 219:949, November, 1930.
- ⁵Lloyd, Eric I.: *The British Medical Journal*; 3692 177, August, 1931.
- ⁶Davidson, Edward C.: *Minnesota Medicine*; 13:775, November, 1930.

ABSTRACT OF DISCUSSION

Leonard Freeman, M.D., Denver: Skin grafting is one of the important things in the treatment of burns to prevent contractures, deformities, and sepsis. It can be done in various ways. One can use small pinch or Thiersch grafts, or full thickness grafts. We should not lose sight of the importance of the buried graft. In this method small pinch grafts can be used, or even Thiersch or full thickness grafts. In using pinch grafts, the grafts are seized with sharp-pointed forceps and thrust well beneath the surface of the granulations. If Thiersch grafts are used, they are threaded into a curved needle with a large eye and woven in and out among the granulations.

Long, full thickness grafts may be dragged through "tunnels" beneath the granulating surface (tunnel grafting). Buried grafts grow beneath the granulations which may be scraped away if they do not disappear spontaneously. The advantages of buried skin grafts are several: (1) The grafts are protected from changes in temperature and from bacterial invasion. (2) They receive nourishment from all sides, and plenty of it. (3) They are protected from traumatism, particularly in the changing of dressings. (4) They are not disturbed by muscular contractions. In fact, buried skin grafts can often be used in ambulatory cases.

Instead of using superficial pinch grafts, one may use the full thickness pinch grafts advocated by John Stage Davis.

It should be understood that buried grafts often do not give as good a cosmetic result as might be desired and hence should be used with reservation in exposed places.

Thad P. Sears, M.D., Denver: The textbook teaching, as I know, is that such cases may develop edema if fluid is over-pushed. I think this is a mistake. I believe that the edema is due to the increased permeability of the vessel walls, which is secondary to the traumatism. Escape of the serum proteins from the blood stream into these tissues increases the edema in the tissue and makes the blood stream itself less able to remove the fluid.

In such a case it would seem to me that the real indication is that if edema develops in a burn case, fluid should be pushed still harder instead of discontinued.

THE MECHANISM OF EDEMA*

THAD P. SEARS, M.D.
DENVER

It would be interesting to dwell upon some of the general considerations relative to the subject of edema, but to remain within the time limitation of this discussion it will be necessary to pass at once to the subject matter. We may pause, however, for a moment to note that edema as a symptom is one of the commonest findings encountered as a sign of serious illness. Not only are we daily concerned with its significance and treatment, but if the mechanism could be explained by which excess fluid is deposited in the tissues, it would throw light upon many of the problems of cellular chemistry concerning which we are not now informed.

In the study of this mechanism, the essential factors are those which pertain to the adjustments by which the normal tissue maintains the constancy of its proper water balance. If this constancy could be explained, the alterations which result in edema would likely be demonstrable at once.

In the general discussion of the subject it is necessary to examine the several theories which have been stressed by observers in this field. A list of these theories is here presented:

1. Errors in the central nervous system.
2. Errors in lymphatic drainage.
3. Disturbances of electric potential in the tissues.
4. Errors in the physical chemistry of the tissue colloids.
5. Excessive filtration of water from blood to tissues.
6. Reduced absorption of water from tissues to blood stream.
7. Increased permeability of the capillary walls.
8. Disturbances of the sodium chloride balance.

9. The theory of primacy of the tissues in nephritis.

These will be considered in order.

Errors in the Central Nervous System

Some investigators have predicated a mechanism in the central nervous system which has to do with the control of capillary permeability and tissue fluid concentration. Elwyn, and Abe and Sakata conducted a series of experiments in which sodium chloride solutions were injected into the arterial and venous sides of the circulation; they concluded from their results that a sodium chloride center had been demonstrated.

The vasomotor centers have to do with the velocity and distribution of blood flow. That these two factors might have to do with edema is readily seen, but the facts have not been correlated. On the clinical side, observers have noted the evident relationship of the local edema of urticaria and dermatographia to the angio-neurotic group of nervous instabilities. Errors in water balance have been mentioned in the etiology of epilepsy. Epileptics gain weight before an attack and lose weight by diuresis following the seizure. Delirium ensues when the cytoplasm of the brain takes up water at the expense of the interstitial spaces, or coma when the opposite condition pertains. We may conclude, however, that this field of research has as yet not been sufficiently explored to explain the facts of general edema.

Errors of Lymphatic Drainage

This factor in the production of edema was probably the first one studied and it is likely to be the last one understood. Lymph was early regarded as a product of secretory function in the endothelial cells and its accumulation in the tissues was assigned to failure of proper drainage. The selective filtration of substances of equal osmotic tension seemed to point toward secretory activity in the endothelium. This was offered as an answer to the point so often disputed as to why salts of equal osmotic pressure do not pass through the endothelium with equal

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The author has a list of seventy references which he will gladly supply to any doctor who desires further reading upon this subject.

ease. It has been shown that in the period of edema formation, the cisterna chyli and thoracic ducts are relatively dry and that these structures again conduct a flow coincident with the reabsorption of the transudate. However, in the case of massive edemas, the lymphatic channels would seem to be physically inadequate for the removal of the necessary quantity of fluid, and the whole problem is complicated by the circumstance that the lymph capillaries begin as blind tubules in the intracellular spaces. This introduces a semi-permeable membrane between the edema fluid and the lymphatic lumen and presents another problem in osmotic relationship.

Disturbances in the Electrical Potential in the Tissues

Keller advanced the theory that interstitial fluids move to points of greater electro-negativity, i. e. the relative cathode. Various dyes were used in this demonstration.

Disturbances in the Physical Chemistry of the Tissue Colloids

A consideration of this factor in the mechanism of edema is equivalent to a study of the work of Martin Fischer. The tissue colloids can be thought of as the building material of which the cellular components of living matter are constructed. These structures are as varied as the multiplicity of life forms, but the colloids which constitute them have certain constant characteristics in common, a few of which may be here briefly reviewed. Specifically they are these: 1. Colloids (hydrophilic) when placed in distilled water become greatly swollen. 2. This swelling is much greater if the water is acidulated. 3. The swelling is inhibited if non-reacting electrolytes are added to the acidulated mixture. Under conditions of proper control a colloid may take up forty times its weight of water.

Fischer obtained these results when he treated fibrin, gelatin discs, an enucleated eye-ball, and parts of various test animals, by immersion in solutions as indicated above. From his studies he concluded that the cause of edema resides in the tissues themselves without reference to the presence of a circulation beyond its function in bring-

ing water to the tissues. He held that whenever an adequate amount of water is available, the tissue colloids will take up more than a normal quantity of fluid if some agent increases their normal affinity for water.

Having demonstrated a mechanism by which water could be drawn into the tissues, he sought a pathologic factor which could so increase this affinity that edema would result. He found this factor in the production of acids in those conditions known to be associated with edema. In the suboxygenation of anemia or heart disease, or the failure of the excretion of acid radicles in nephritis, he found a cause of the acidulation of the tissue colloids. He held that circulatory stasis will not of itself produce edema, and he sought to prove this assertion by ingenious experiments in which he ligated various blood vessels. Ligation of the renal vein produced less swelling in the kidney than ligation of the renal artery, although in the first instance he had marked stasis and in the last instance none at all. For the next two ligations he selected organs which have two afferent blood supplies. In the liver the portal circulation, and in the lung the pulmonary circulation, gave a source of water to the tissues, but edema did not develop until he interrupted the intrinsic blood supply to the parenchyma of these organs. Ligation of the hepatic artery gave marked swelling of the liver, and he obtained no pulmonary edema until he obstructed the bronchial arteries, although he had previously produced intense pulmonary stasis by partial ligation of the pulmonary vein.

He observed that there is great swelling of the tissues distal to an arterial thrombosis and that a dead body placed in water becomes greatly swollen. All of these phenomena were attributed by Fischer to the tissue acidity of anoxemia and its resultant effect on colloid imbibition. In other experiments he showed that electrolytes inhibit swelling and he successfully applied this method to the reduction of the edema of inflamed joints by the injection of sodium citrate into the surrounding areas.

Objection has been made to Fischer's theory on the grounds that the edema fluid is free in the interstitial spaces and body cavities and not bound to the tissue colloids and that a state of acidosis manifests itself as a reduction of alkali reserve rather than an actual tissue acidity. But, as will be later seen, there is a present tendency by many modern investigators to place the causes of edema within the cells of the capillary bed, and some observers have re-affirmed the truth of the Fischer theory.

Increase in Filtration Pressure and Decrease in Reabsorption

These two factors in the mechanism of edema are considered together since they go hand in hand. Together with the theories of increased capillary permeability and tissue primacy, they constitute the modern concept of edema.

The filtration pressure is that force which tends to drive fluid out of the blood vessel into the tissue. It is a term synonymous to blood pressure if it is understood that filtration pressure refers specifically to blood pressure in the capillary bed. Against the force of filtration pressure, which works to drive fluid out of the blood stream, there is opposed the force of osmotic pressure, which exerts itself to draw fluid back into the blood stream. The osmotic pressure is a force which resides within the blood stream itself and, as will be seen later, depends upon the concentration of the plasma proteins. The theory can now be stated by saying that edema results when the sum total of the filtration pressures is greater than the plasma osmotic pressures, or in other obvious terms that edema develops when transudation exceeds absorption.

By way of illustration we may consider the normal mechanism of water balance in the capillary areas. The intra-capillary blood pressure has been shown by use of the micro-capillary tonometer to average about 25 mm. of mercury. The normal osmotic pressure of the plasma proteins is also about 25 mm. of mercury. At any point in the capillary bed where these two forces are equal an equilibrium is therefore established and filtration outward will exactly

balance absorption inward. But by reference to the dynamics of the circulation, it will be seen that at any point on the arteriole side of the capillary the blood pressure will be higher than 25 mm. and therefore greater than the osmotic pressure of the plasma proteins, and at any point on the venule side of the capillary the blood pressure will be less than 25 mm. and hence less than the osmotic pressure of the plasma proteins. We have then a condition whereupon the arteriole side the pressure balance is in favor of filtration and water passes into the tissues, and on the venule side the balance is in favor of osmosis and water passes out of the tissues. In normal physiology these two factors are exactly balanced and the fluid element of the tissue remains constant. It can be seen, however, that if from any cause the intravascular blood pressures are raised or the osmotic pressures lowered, edema will result. That these factors are subject to just this variation has been amply shown by innumerable investigators. In congestive heart failure, the venous blood pressures are raised by the increase in resistance on the right side of the heart and in nephritis the plasma osmotic pressures are reduced by the drain of serum protein through the albuminuria. This view of the mechanism of edema was first stated by Starling in 1899 prior to the work of Fischer.

The drain of the serum proteins is the assignable reason for a high protein diet in acute or chronic parenchymatous nephritis. The edema of arterio-sclerotic nephritis is due to cardiac failure, but a normal protein diet is no less indicated to combat anemia and to prevent a protein starvation which in itself can produce edema.

We may now consider wherein the plasma proteins are particularly adapted to fulfill the requirements of an osmotic agent in the blood stream. That these proteins are not the only components of the plasma which contribute to osmotic tension is readily seen. In fact the osmotic pressure of the plasma proteins is only about 25 mm. of mercury as compared to about 5325 mm. of mercury given by an .85 per cent solution of sodium chloride. But the especial value of the pro-

teins in this connection depends specifically upon the circumstance that they do not pass by osmosis through a permeable membrane, whereas the inorganic salts of the blood plasma pass with such ease through such a membrane that they are unable to maintain any constant osmotic pressure on the intravascular side of the capillary walls. The plasma proteins do not exert a high osmotic pressure, but since they do not dialyze they remain inside the vessel walls and exert a constancy of pressure which could not be obtained by any agency that reaches an osmotic equilibrium so readily as does an inorganic salt.

If one asks why the plasma proteins do not dialyze, or why they exert so low an osmotic pressure, the answer is found in a reference to their enormous molecular weights. The plasma proteins consist largely of serum albumin (5 per cent) and serum globulin (2 per cent). These compounds are colloids and as such have molecular weights which vary between ten and forty thousand. Mathews gives a value of 15,697 for serum albumin. Compare this to the molecular weight of 58.5, which is given for sodium chloride. Since osmotic pressure varies indirectly as the molecular weight, it follows that any colloid will be of low osmotic tension. In this case, serum albumin and serum globulin in a seven per cent solution give molecular weights above 16,000 and an osmotic pressure of about 25 mm. of mercury, as against sodium chloride in .85 per cent solution, having a molecular weight of 58.5 and an osmotic pressure in this dilution of 5325 mm. of mercury, which is a little over seven atmospheres.

The weight of the molecules of the plasma proteins also determines the limitation of their diffusibility. They are physically too large to pass through a permeable membrane. They are in fact so large that they can be thrown out of solution by a centrifuge or actually seen as diffraction halos under the ultra-microscope.

Errors in Permeability of the Vessel Walls

This factor is of importance, but it has not been exhaustively studied. The fact is established that the capillary walls become

more permeable under certain conditions of inflammation, trauma, acidosis, or anoxemia. Landis showed in 1927 that a lack of oxygen alone will quickly render the capillary wall more permeable not only to water but to the plasma proteins as well. This is the condition in an inflammatory exudate, as evidenced by its high protein content and specific gravity. In such a case, edema will develop more readily, and any plasma proteins which pass into the tissue spaces by reason of the abnormal permeability will reduce the osmotic pressure of the blood stream and correspondingly increase the ability of the tissues to attract water.

Disturbances of the Sodium Chloride Balance

Various workers have produced experimental edema in dogs by reduction of their serum proteins from the normal seven per cent to a level below four per cent. This reduction is accomplished by protein starvation in the diet or by plasmapheresis. Animals prepared in this manner invariably develop edema when the serum proteins fall below the critical four per cent. Addition of salt to the animal's diet, when the serum protein is above four per cent, does not result in edema, but if salt is added when the serum proteins are below four per cent, there will be an increase in the edema already present. These observations indicate that sodium chloride is an accessory factor, though not the primary cause, of edema. It can be further shown that it is the sodium ion of the sodium chloride that is responsible for this effect.

Sodium chloride is retained in the body in the glomerular and tubular lesions of the kidney. Such salt as is thus stored in the tissues will hold water as a solvent. This again is an accessory factor in edema. Exclusion of salt from the diet is a rational treatment in only the edema of parenchymatous nephritis. In the chronic interstitial type of nephritis, salt restriction may do the patient actual harm by robbing him of his only opportunity to replace the salt washed out by his polyuria. In any case the exclusion of salt will not reduce a nephritic edema

beyond the point where the low serum protein is made manifest.

The Theory of Tissue Primacy in Nephritic Edema

This theory is a more recent development in the study of edema and yet its origin can be found in the work of Martin Fischer when he assigned the causes of edema to changes in the tissues themselves.

The theory is as startling as it is attractive. Its advocates defend the position that in the disease now termed chronic nephritis, the kidneys themselves stand in a secondary position and the renal changes are a local sign of a general condition affecting the cellular tissues throughout the body. They hold that in health or disease the kidneys continue to excrete water and metabolites, if these are presented to the kidneys for excretion. Proponents of this view object to the older theory that inflammatory or degenerative lesions of the kidney render it less permeable to water and metabolites and more permeable to serum albumin. They point out that a secretory membrane which will permit the filtration of a colloid (serum protein) of a molecular weight of 16,000 should not be impermeable to the small molecule of water or salt. The theory of tissue primacy, therefore, explains edema upon the basis of an increased avidity of the tissues themselves whereby water is held in the areas of edema and not presented to the kidneys for excretion.

The same situation is claimed for the metabolites. When a nephritic patient, under stress of some sudden crisis, passes into a state of uremia, the non-protein blood nitrogens at first drop—even though the patient is getting worse. As the uremia continues the non-protein nitrogen values begin to rise, and if at this time the patient suddenly improves, the non-protein nitrogen readings continue to elevate even though the patient is recovering. These facts are taken to mean that in the period of developing uremia the metabolites are disappearing from the blood because they are held in the tissues. With improvement in the patient the nitrogen metabolites are promptly unloaded upon the blood stream for their

transportation to the kidneys. From this viewpoint, therefore, the non-protein nitrogen values are to be interpreted as an index of chemical equilibrium between blood stream and tissues rather than as a test of renal function. This view is in harmony with the reported cases of uremia showing low non-protein blood nitrogen values.

It has long been known that where a total renal insufficiency has been produced by poisons or accidental total nephrectomy, the death that follows is attended by low blood pressure, no edema, and death as by exhaustion. But where a true uremia is present the death is marked by a high blood pressure, edema, delirium, and coma. In other words, renal insufficiency alone does not seem to explain the symptoms of uremia. Such symptoms are in themselves suggestive of the action of a toxic agent. That this toxic agent is not a retained normal metabolite is a reasonable assumption in view of the failure to isolate any normal urinary body which will produce the symptoms of uremia when injected into a test animal.

The theory of tissue primacy postulates the production of such a toxic fraction as a result of some incomplete catabolic reaction in the tissues of the nephritic patient. These fractions are then conjugated with serum albumin to reduce their toxicity and are excreted by the kidneys as serum protein which has lost its normal constitution. The serum protein which is so utilized depletes the blood stream of its normal serum protein concentration and results in the low values characteristic of parenchymatous nephritis. That such toxic bodies do appear in the urinary proteins has been shown by various precipitin, dialytic, and hydrolytic technics. These fractions are looked upon as being the essential cause of uremia, and the whole theory of tissue primacy ably explains the facts of edema and such phenomena as the intradermal salt test of McClure and Aldrich.

Conclusions

1. A review is given of the various theories of the mechanism of edema.
2. An outline of a new theory of nephritis is presented.

3. Edema due to cardiac or nephritic causes is secondary to an imbalance between the filtration and osmotic pressures of the blood stream, plus changes in the permeability of the capillary walls and increase in the avidity of the tissues themselves for water. The local edema of venous obstruction belongs in this group and the edema of starvation.

4. Inflammatory edema and possibly anemic edema is assignable to changes in capillary permeability secondary to traumatism, infection, or anoxemia.

5. In all types of edema, a normal protein diet is indicated with only such salt restriction as is consistent with the type of edema found.

ABSTRACT OF DISCUSSION

C. N. Meader, M.D., Denver: The newer conceptions of the causation of edema raise at once the question of therapeutic implications. If further experience proves them true, our past methods of protein feeding in nephritis are wrong. Clinical papers already published by McCann, McLester, Lashmet, and Barker indicate that protein rations as high as 75 to 150 grams may be borne by the nephritic, not only without harm but with marked clinical benefit. It has long seemed to me poor judgment to deprive the chronic nephritic of protein in a disease of many years duration, and I have advised these patients to take a maintenance ration. No harm from this has been apparent clinically.

The mechanism of edema is not, however, always simple, and the effect of sodium chloride cannot be overlooked. Nor should it be forgotten that it is the sodium ion which is important and that the benefit from salt-restriction may be nullified by a liberal intake of sodium-containing food. The introduction of a diet, chosen to supply a neutral or alkaline ash, as devised by Lashmet and by Barker, is an important advance. The usefulness of the acid-forming salts is great, but their effectiveness, too, may be entirely offset by an alkali-producing diet.

E. R. Mudge, M. D., Denver: In the laboratory the subject of edema brings up many puzzling problems. Fluids examined are divided into transudates, those carried into the tissues, and exudates those that arise from inflammation.

Our studies of the past have stressed morbid histology of fixed tissues, and often the interpretation of these studies did not agree with the clinical picture as seen in cases of nephritis, with and without edema.

The normal or abnormal activities of the living cell when understood give more important information, and diagnostic tests based on the functional activities of living cells will further our medical knowledge of the future.

At the present time very little is known of the origin, chemistry, value, and final disposal of the many protein substances classed by usage as albumin. These are very complex problems and will require solution before the subject of edema is clear.

R. W. Arndt, M.D., Denver: Singularly enough

Dr. Meader's thoughts and mine are virtually identical. Of course we were all very much interested and informed by Dr. Sears' paper. It seems to me the practical thing that an internist can derive from it is to stress an increase in the protein intake in cases of acute as well as chronic Bright's disease, in that form characterized by edema and by albuminuria where there is a marked loss of body protein.

Formerly we were afraid to give protein. We were afraid that the degradation products would harm the kidney. We thought more of the kidney than we did of the patient. The patient lost a lot of strength. Our old Karell diet of milk on which we kept them for so long, I'm sure did them a lot of harm.

That prejudice extended to the laity so that even now it is pretty hard in well-informed families to get them to use meat in the dietary of a patient who has either acute or chronic Bright's disease. I don't think it is of so great importance in nephrosis. There the essential mischief is in the arterial system, and they will die of cardiac failure or circulatory failure rather than of renal incompetence.

I think we ought to step the protein intake up to say 150 grams in an adult. Allowing four calories per gram of protein means 600 calories of his total intake a day in protein.

In a practical way that means what? A large serving of meat, a quart of milk, and a couple of eggs. He ought to be getting about that amount of protein a day.

I give it in that form because there is a high biologic value. It is easily absorbed. If you give him that much meat, you not only help the patient, but you help a good many of your friends who are raising Herefords.

R. M. Fulwider, M.D., Fort Lyon: I desire to make a plea for a revamping of the nomenclature. The term "nephritis" is very misleading, and we don't find nephritis in one case out of a dozen that are so diagnosed.

Dr. Addis of San Francisco has adopted the term "Bright's disease" covering every form of what was formerly classified nephritis, such as glomerular nephritis, the arterio-sclerotic type, the hemorrhagic type, etc. He says that is the proper term, that you wouldn't designate a condition as pancreatitis when diabetes is present and because there is a disturbance of the pancreatic metabolism.

Dr. Sears (Closing): I would not be construed to mean that the use of salt in edema may not increase the edema. What I tried to say was that the addition of salt to the diet will not cause the edema nor will it increase the edema unless the serum protein is already below four per cent.

I said nothing about the factor of increased permeability in this mechanism. It is a very important phase. I have not the time to cover it. It is the explanation of inflammatory edema and also has a part to play in cardiac edema. Increase in permeability allows the serum proteins to pass through when they ordinarily would not do so.

As regards the last point made, there are very many workers in this field all over the world who still favor the term "Bright's Disease." They say all forms of nephritis as we are now differentiating them are really blending in one with the other, and we have not yet reached the stage of pathologic exactitude where we may say one nephritis is different than the other. They favor the term "Bright's disease."

CASE REPORTS

TRANSITORY VESTIBULAR AND AUDITORY DISTURBANCES FOLLOWING MUMPS

GERALD M. FRUMESS, M.D.
DENVER

The occurrence of meningitis or meningo-encephalitis is a not infrequent complication arising during the course of, or following an attack of mumps. Deafness has also been known to occur occasionally as a sequel to mumps. The deafness may be independent of meningitis or encephalitis, and is usually labyrinthine in origin and unilateral.

The meningitis complicating mumps is of a sero-fibrinous variety. It may be mild or severe, but rarely terminates fatally. Its pathology, therefore, has not been exhaustively studied. The cerebro-spinal fluid shows an increase in pressure, with increased globulin content and lymphocytes. That an associated encephalitis may occur is indicated by the presence of focal symptoms.

A few years ago Voss¹ described several cases of auditory and equilibratory disturbance in the course of epidemic parotitis.

The following case is one which I saw recently and which would appear to be representative of a type of complication similar to that described by Voss and associated with localized meningo-encephalitis making its appearance several weeks following the subsidence of an attack of mumps.

The patient, H. W., aged 36, first called me at 10:30 p. m. on April 30, 1932. For the preceding two days he had had frequent spells of vertigo, so severe as to make it necessary for him to cease work. His occupation was that of cook in a hotel restaurant. About two hours before he called me, he experienced a sudden attack of vomiting, not preceded by nausea, and apparently projectile in type. It was accompanied by a bursting occipital headache and intense vertigo. He complained of tinnitus in the left ear, whistling in character, and impaired

hearing on the left side. His temperature was 97.8° F. and his pulse 112. Examination revealed an undernourished male, apparently 35 years of age, very apprehensive, and appearing acutely ill. His pupils reacted to light and accommodation. External ocular movements were normal with the exception of the presence of rather marked nystagmus upon looking to the left, the fast component being in the direction of vision. It was impossible to undertake caloric or rotatory tests under the circumstances. There was no papilledema. The tympanic membranes were normal, but the patient could hear a watch tick only twelve inches distant from the left ear, whereas for the right ear his hearing distance was forty inches. The remainder of the physical examination was negative. His knee-jerks, biceps and triceps jerks, and abdominal reflexes were normal. There was no adiadochokinesis. No gross asynergies or tremors were present. Subsequent examination revealed a positive Rhomberg sign; the Wassermann reaction was negative. Erythrocyte count was 4,400,000; hemoglobin 80 per cent (Talquist); leukocyte count 6,400, with 71 per cent polymorphonuclear leukocytes, 26 per cent lymphocytes and 2 per cent mononuclear cells. Unfortunately, no lumbar puncture was attempted.

The past history was largely negative except for an appendectomy performed four years before, and an attack of bilateral epidemic parotitis commencing on March 17. During resolution of the parotitis a right sided orchitis occurred. This complication subsided in a week's time, and since then the patient enjoyed excellent health up to the time of appearance of the vertigo and tinnitus, two days before I saw him.

The course of illness was one of gradual, uneventful recovery. The projectile vomiting recurred once on the following day. Two days later the patient was up and about. On May 7, the vertigo was gone, but the tinnitus continued. On May 12, he was symptomless. Treatment was symptomatic. In view of the work of Kermorgant², who believes a granular spirochaete to be the etiologic agent of mumps, I was considering

the use of one of the arsenicals if the symptoms did not rapidly abate.

The above case illustrates the occurrence of local meningitis either involving the acoustic nerve or accompanied by an encephalitis producing the focal vestibular and auditory symptoms. Mumps meningitis and its sequelae seems to be assuming more and more importance, and I believe it is well to remind the practitioner of its existence by an occasional case report.

REFERENCES

Voss, O.: "On the Incidence, Genesis, and Therapy of Auditory and Equilibrium Disturbances in the Course of Epidemic Parotitis." *Deutsche Med. Wochenschrift*—53:2023, 1927.

Kermorgant, Yves: "Contributions to the Study of the Etiology of Mumps." *Annales de l'Institut Pasteur*, 39:565, 1925.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Trend Continues Toward Cooperative Medicine as Solution to Problems of Middle Class

"Hiring a Doctor by the Year—A successful experiment in community cooperation in the plateau country of North Carolina is described in the August issue of *The Farmer's Wife*. In return for a membership fee of \$15.00 a year per family, members of the Stewart's Creek Doctor Association receive all the general medical care needed which a general practitioner usually gives."—*Journal of Home Economics*, November, 1932.

Norman J. McPhail, President of the Pacific Life Extension and Hospital Service System, Inc., in discussing the Periodic Payment Plan, throws a new light on the responsibility of the well people toward the support of medical service which must be kept available at all times. The well person under the present system does nothing year after year toward maintaining the service which must be ready at all times to serve him, and the cost is borne entirely by about 10 per cent of the public.

The Periodic Payment Plan would help solve the financial trouble of the medical

service and assure at the same time professional guidance to the well and minor treatment to the slightly ill or afflicted who deny themselves this service because of its present high cost.—*Western Hospital Review*, October, 1932.

Health Programs in Schools

According to periodicals this month, constructive school health programs are being organized in different parts of the country. The Massachusetts state department of education has published a new course of study in health education for the elementary schools which is based on sound educational theory and in line with modern practices of teaching.—*Teaching Health to Children*. Massachusetts Tuberculosis League.

At the February meeting of the Department of Supervisors and Teachers of Home Economics, National Education Association, the nutrition needs of the school child and the responsibility of the home economics teacher were thoroughly discussed. This was done with a view of working out a carefully planned program of nutrition-health education extending throughout school life and creating an attitude of responsibility among the teachers themselves for this program.

The Akron public schools have a unique program of health education throughout its school system. They adopted and developed the health program of the National Dairy Council. In the high school the health course is coordinated with other subjects, hygiene, biology, etc., and unusual devices are used to arouse the interest of the pupils. Cafeteria menus are carefully checked for their food value by the children themselves. Children choosing a correct lunch at noon are given an A card, while others get slips reminding them of the foods needed; pupils keep records of their sleep, exercise, work, study, and time out of doors which they check with the teacher. Rat feeding is an activity which has vividly impressed the children with the value and results of food. The health instruction is handled through the regular school channels in the elementary schools. The teachers, furnished with study

plans and supplementary material to guide them, make preliminary examinations and daily checks of health habits.—*Journal of Home Economics*, November, 1932.

War against deafness must begin with the school child, according to Frank H. Rodin, M.D., writing in the *Western Hospital Review* for October. A recent survey by the San Francisco Board of Health in conjunction with the Board of Education shows that the work may be covered in four steps. 1. Prevention. This is accomplished by preventing contagious diseases which often affect the ears, the removal of infected tonsils and adenoids, and the building up of the malnourished child to increase his power of resistance to disease. 2. Find children who have a defect which needs treatment and where treatment may restore normal function or prevent a further loss of hearing. This is best accomplished by a survey with the phonograph audiometer. 3. The children who failed to show normal hearing are examined by an otologist with object to discover if possible the cause or causes producing the loss of hearing which may need medical attention and to find the children who have such an impairment of hearing that they need lip reading instruction. 4. The follow-up work of notifying parents, arranging for medical care and special instruction. A second survey is being made to check the positive results of the first, and facts will soon be available to the public.

Many Factors Combine to Decrease Child Labor

The American Child for November tells us that legislative enactments, public opinion, and technological changes in industry are all playing their part in the steadily increasing number of child laborers. The per cent of reduction varies greatly in different industries. The large reduction in the number of children employed in clerical occupations, messengers, errand boys, etc., is perhaps explained by the fact that this service is the first sacrificed in hard times. The decrease in the number employed in manufacturing and mechanical industries offers the most interesting study of all. Since appren-

ticeship offers the surest road to skilled workmanship and advancement in industrial occupations, this in itself is significant of the lack of worth-while openings for junior workers.

Recent surveys on the employment of boys in the coal mining industry in Pennsylvania have resulted in the issuance of rulings by the state industrial board prohibiting the employment of minors under 18 years in car-handling, and in a number of other especially hazardous kinds of work both inside and outside the mines.

A recent resolution of the National Education Association "favors strict economy in the administration of public schools, but it is unalterably opposed to any retrenchment which injures the children of America either by lowering present educational standards, destroying the morale or effectiveness of teachers, or eliminating school subjects and activities contributing to the health, culture, or vocational training of our citizens."

Changing industry plays a large and unnoticed part. The creative satisfactions accruing to handicraft workers in simpler times, exist in the world of skyscrapers, locomotives, and turbines, but they are more difficult of attainment. Intricate skills, scientific and mathematical knowledge, the perfect muscular coordination that makes it possible to walk a narrow beam, are the qualities needed. They are the fruit of prolonged and patient training, of intelligent effort, not to be hoped for by minds darkened by ignorance or bodies stunted by premature labor.

With few exceptions, the kinds of work where child labor increased, either absolutely or relatively, the total number of child workers, are those where the pay is low, regulation ineffective, and hours long.

CHANGE OF ADDRESS

Please note the new address of the Colorado State Medical Society and Colorado Medicine: 537 Republic Building, Denver. The telephone number, KEystone 0870, is unchanged.

Take this Journal home to your wife.

LIBRARY NOTES

"A Library Is a Summons to Scholarship"

EDITOR: J. J. WARING, M.D.

BOOK REVIEWS

Medical Aspects of Human Fertility. Series issued by the National Committee on Maternal Health, Inc. Control of Conception. An Illustrated Medical Manual. By Robert Latou Dickinson and Louise Stevens Bryant. Baltimore: The Williams and Wilkins Company. 1932. 272 pages. Price \$4.50.

Robert L. Dickinson is one of the foremost of the passing generation of gynecologists. His excellent artistic talent, exhibited in his skill in drawing, has added clarity to many important articles in gynecology and obstetrics. Dr. Dickinson, assisted by Dr. Louise Stevens Bryant, has now given us the manual: "Control of Conception." The book is an answer to many requests directed to the National Committee on Maternal Health for an adequate and yet compact statement of that which is now known about birth control. Many women and a few men know all about birth control. Commonly inquiries are made of the doctor with the expectation that he will be able to give unfailing instruction. The doctor, at times too freely and often too confidently, gives the desired instruction. It will temper one's self-assurance to read Dr. Dickinson's careful assessment of the value of all known methods of birth control.

Anyone who reads "Control of Conception" will not be left in doubt about its being the best presentation of the subject we have had. More ample knowledge, constantly sought and expected, can alone give us a better book.

The illustrations showing clearly the anatomy and physiology of sex function are, as one would expect, excellent and are from Dr. Dickinson's own pen. They are in outline, as lucid and as devoid of suggestion as an architect's floor plan.

C. S. ELDER.

Iconographic Sketch of Laennec. By Nolie Mumey, A.M., M.D., Author of "Life of Jim Baker," "Evolution of Flight," etc. A limited edition of one hundred and ten signed copies. Denver: Printed privately. 1932.

This richly bound de luxe volume is reprinted in part from a series of articles which appeared in Colorado Medicine from January through June, 1932, in Dr. Mumey's page, "Biography as Related to Medical Terminology." Woodcuts by Miss Thelma Jordan are interspersed throughout, enhancing the appearance and the reading. The likenesses of Laennec at different periods of his life vividly portray the fluctuations in his delicate health.

Brief and lucid, this splendid tribute to the life of a great physician, the inventor of the stethoscope, may be read within an hour. The last few pages are occupied by a chronology of the life of Laennec. Readers who have enjoyed these pages in Colorado Medicine will particularly appreciate reviewing this life sketch and studying the woodcuts.

D. W. MACOMBER.

Medical Jurisprudence. By Carl Scheffel, Ph.B., M.D., LL.B. Philadelphia: P. Blakiston's Son & Company. 313 pages. Price \$2.50. 1931.

The volume is a discussion of some of the legal pitfalls against which a physician should be on his guard, rather than being a general work on the larger subject of medical jurisprudence. "Legal Advice to Medical Practitioners" would have been a possible title, and the author, in his introduction, does in fact describe the book as being "a sort of legal first-aid." It is a difficult subject to cover in small compass.

The successive chapters deal with the physician's various contractual relations, his dealings with assistants and others for whose acts he may be held responsible, his risk of malpractice actions arising out of his real or technical wrongdoing or negligence, his rights and duties when serving as a witness in court, his property interests, and the possibilities of criminal responsibility. The chapter on contractual relations, in addition to the usual topics, includes warnings against contracts offered by tricky collection agencies, against installment buying, and against failure to read and analyze policies of insurance against malpractice claims. A final chapter deals rather informally with the physician's interest in legislation. References to court decisions are scattered through the text for illustrative purposes, with sufficient comment to indicate the points decided.

The past two or three years have been fruitful in the field of medical jurisprudence with the publication of several ambitious volumes. This smaller book, within its special field, is a helpful supplement, and contains material which is often slighted in the larger works.

ROGER H. WOLCOTT.

The Curative Value of Light, Sunlight and Sunlamp in Health and Disease. By Edgar Mayer, M.D., F.A.C.P. Consultant in Light Radiation to the American Medical Association Council; Medical Director of the Northwood Sanatorium and the National Variety Artists Sanatorium Saranac Lake, New York; Medical Consultant to the Broad Street Hospital, New York City. Monmouth Memorial Hospital, Red Bank, N. J., and Municipal Sanatorium of Otisville, New York, etc. D. Appleton and Company. New York and London, 1932. 175 pages. Price \$1.50.

This book, while written primarily for the laymen, is an excellent book for the physician, for it is largely a condensation of the author's larger book: "Clinical Application of Sunlight and Artificial Radiation," published a few years ago. He deals with the fundamental conceptions of the action of light upon the human body, tracing the development of this knowledge from the ancient Greeks. Beginning with Herodotus, then on down through the works of Hippocrates, Galen, and Celsus, there are numerous references to the therapeutic value of sunlight. Hippocrates even mentions the value of the sun in high altitudes in the treatment of tuberculosis.

Like most other medical knowledge, it was largely forgotten in the Middle Ages. It was revived during the last century by French physicians, particularly for the treatment of tuberculosis of the joints. About this time, too, the part played by the air baths began to be appreciated.

Rollier at Leysin, Switzerland, early in this century gave it the great impetus which has brought it to its present high state. He particularly showed the necessity for exposing the whole body rather than simply the diseased part. Then came the great work of Finsen and others, showing that much the same results could be obtained

with artificial light, especially after the introduction of those lamps which gave a predominance of the short rays, violet and ultra-violet. The ultimate problem as to just how light produces its effects upon the body, is still not wholly determined. It is difficult to separate its direct effects from such factors as the exposure of the body to the air. In fact, more and more emphasis is being placed on "air baths." The beneficial effects seem to be closely associated with, though not necessarily dependent upon, pigmentation. He sounds a strong note of warning against the indiscriminate use of light, especially warning against direct exposure of the patient with active pulmonary tuberculosis, also warning against too long exposure, especially to a midday sun. He deals quite at length with the vitamins, showing that D, and to less extent A and C, are largely dependent upon light for their production—also that these can be stored in certain foods by irradiation. He deplores the tendency to use light for everything yet feels that further research will prove it to have a wide field of usefulness, especially in the deficiency diseases and those of the blood forming organs.

O. M. GILBERT.

The Blood Vessels of the Human Skin and Their Responses. By Thomas Lewis. Shaw & Sons. Price \$13.50. 1927.

Though this book has been in print five years it may be assumed that its subject-matter is known to but a minute fraction of the audience to which it should appeal.

It is an account of original researches on human subjects by one who is pre-eminent among living clinical physiologists. Intricate as is the theme attacked, the book is unique in that it should be within the grasp of the more advanced undergraduate medical student.

Lewis carried out his experiments with the aid of the simplest of apparatus, the most important instrument of which was a wooden stick like a foot-ruler. Though all people are "fish to his net," Lewis found the responses to skin irritation greatly accentuated in the class of persons naturally subject to urticarial disturbances, and in young rather than old people.

On the basis of a few experimental phenomena, which anyone may reproduce, Lewis erects a superstructure of physiological, pathological, and immunological consequences hardly paralleled except in the history of Harvey's discovery of the circulation. We can here present only a scanty outline of basic facts and their explanation.

If the end of a wooden ruler be drawn very lightly over the ruddy skin of a young subject, after fifteen seconds or more the path of the stroke becomes distinguished by a relative pallor of the surface which lasts three to five minutes. This pale reaction is due to contraction of the underlying capillaries which have been irritated by the tensions which the "stroke" has induced; mere pressure will not cause it. But when the stroke is performed with firm pressure of the ruler, the response is different. Now the path of the ruler is marked by a sharply defined area of redness coming on shortly after the irritation; moreover, the sharp margins of the red area are bordered by diffuse frames of pallor similar to that described as following light stroking. The sharply defined red areas caused by firm stroking owe their origin to dilatation of the minute vessels of the papillary and sub-papillary layers of the skin; these include the smallest arterioles

and venules and connecting capillaries. But this is not all, for after some seconds a diffuse redness surrounds the area which has been irritated and spreads a variable distance beyond its borders, overcoming the preceding pallor. Lewis calls this diffuse red reaction the "flare," which has quite a different physiological origin from that already described. It is due to a "local reflex" resulting in dilatation of the "strong arterioles" of the skin under sensory stimuli excited in the skin nerves. One remaining phenomenon completes this physiological trilogy. In about one-quarter of young people examined, an urticarial "wheal" makes its appearance in the stroked area within one to three minutes. The wheal may project one to two mm. from the skin surface. It is due to edematous exudate from the minute vessels, and its pressure empties the latter and produces a swelling of characteristic pallor. The so-called "blister" is due to excessive development of urticarial edema.

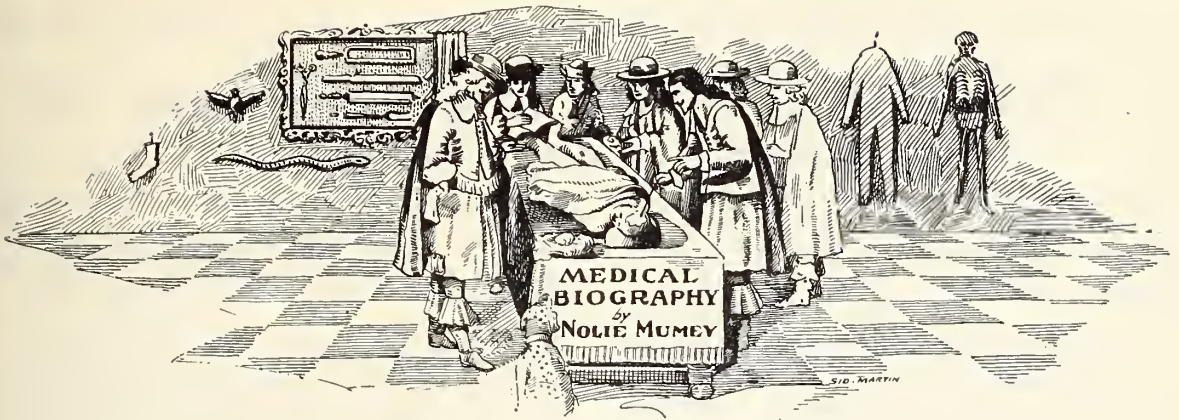
Lewis calls these phenomena following mechanical irritation of the skin, "the triple response;" its elements are (1) local dilation of the minute vessels of the skin independent of nerve action; (2) the surrounding flare; (3) the increased permeability of the walls of the minute vessels leading to local edema. Lewis attributes this physiological complex to a single cause, a definite chemical substance (called by him the "H-substance") with the pharmacodynamic properties of histamine, which is one of the products of protein disintegration. This histamine-like substance is assumed to be stored in the epidermal cells and is released when these are injured in any way. Set free in the tissue spaces the histamine causes dilation of the minute blood vessels and also increases the permeability of their walls (the two events are not necessarily associated). These phenomena occur independently of the nervous system. But the "histamine" set free in the epidermis irritates sensory nerves there found; these nerves ramify on the walls of the strong arterioles and act as dilators on their muscles; this is the peculiar "local reflex" to which "flare" is due. It must not be supposed that these statements are unsupported guesses.

The interested reader will enjoy the splendid confirmatory work of H. H. Dale described in his Croonian Lectures, *Lancet*, I, 1929. He discovered the biological action of histamine which, fundamentally, is to contract the plain muscles but to relax and increase the permeability of endothelial cells, and therefore of the capillary vessels.

Surgical shock, anaphylactic shock, the various eruptions of skin diseases and exanthemata, all are attributed by these masters of experimental research to the setting free of a histamine-like substance from its cellular storehouses.

The older physiology knew nothing of the teaching of this modern school according to which sensory nerves may conduct impulses in a centrifugal or "contrary" direction. These "antidromic" fibres of the posterior spinal nerve roots are apparently intimately concerned with the nutrition of the skin; they perhaps represent the "trophic" nerves whose existence was generally assumed by clinicians but doubted by physiologists. Lewis very definitely explains the phenomena of herpes zoster as a result of centrifugal inflammation of the antidromic sensory fibres causing local liberation of histamine and consequent inflammation and blistering along their course.

HENRY SEWALL.



(Continued from January Issue)

Dr. Mitchell was appointed to the staff of the Philadelphia Orthopedic Hospital in 1870, which was then located over the shop of an instrument maker on Ninth Street south of Market. Later the hospital was moved to Summer and Seventeenth Streets, and due to Dr. Mitchell's association with the institution, there was soon developed a large clinic for nervous diseases, and the name was changed to "Orthopedic Hospital and Infirmary for Nervous Diseases."

Dr. Mitchell had one of the greatest consulting practices in the country, which brought patients from all parts of the world seeking his medical advice. The story is told of a patient from Philadelphia, who had occasion to consult an Italian physician abroad.

"But you are from America? Yes? Why, then, not take the Vermichelli treatment?"

"What's that?" asked the patient.

"What, you don't know the treatment of the famous Dr. Vier Mitchell of Philadelphia?"

The unusual achievements of Dr. Mitchell in medicine are many. Among his numerous discoveries, he introduced the card index system for case records. The story is told by the celebrated Osler that he was interviewed by him for the appointment of a professorship in Clinical Medicine at the University of Pennsylvania. He was invited to a dinner where cherry pie was served with seeds. "I had read of the trick

before," said Osler, "so I disposed of them genteely in my spoon—and got the chair!"

Dr. Mitchell's skillful clinical methods as well as his generous manner in giving assistance to other physicians impressed every one. He never feared they would take advantage of what he knew or thought. Osler said of him during his stay in Philadelphia: "Had I been his son, he could not have done more, in every possible way, to promote my welfare."

Dr. Mitchell's professional success was due in a measure to his personality, his methods, and his psychological insight into human nature. He was careful in selecting his assistants and related many anecdotes concerning them. One of these, which he was fond of telling was about a former physician from Arkansas. When he applied to Dr. Mitchell for an appointment, he was asked about his accomplishments. He replied, "I have only one." He then removed from his boot a bowie knife and threw it across the room into the panel of a mahogany door. Mitchell's reply to the incident was, "This is a form of surgery which has not yet reached Philadelphia."

Dr. Mitchell developed a remarkable faculty for remembering patients. A man came to his office and said, "Doctor, I don't expect you can remember anything about me, for it has been thirty-two years since I first consulted you." The patient was immediately asked what had been the nature of his complaint. As soon as it was mentioned his entire case was accurately described.

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

Medical Legislation

IT IS expected that the tasks of the Committee on Public Policy should be more arduous during a session of the state legislature, but even more than the usual legislative problems are presenting themselves in the present Colorado General Assembly.

At the time this is written, it is impossible to present an accurate survey of all proposed laws introduced in the present assembly that, if enacted, would affect public health or the practice of medicine. More than 100 bills relating in some way to medicine and public health were introduced in the legislature in that opening fifteen-day period set aside for the introduction of bills. Most of them were introduced "by title only." The state constitution allows a bill to be introduced only by its legal title and enacting clause, with the main body of the bill left blank, to be written later by the legislator who sponsors the measure or by the committee of house or senate to which it is referred. Since most of the medical bills introduced were thus in less-than-skeleton form, they cannot be described. In many instances even the general purpose of the bill is obscure.

The way is thus left wide open for medical legislation of almost any kind. And, when one remembers that a majority of the members of the present legislature are inexperienced in their positions, one might logically say that "anything may happen." Despite the inexperience of many legislators, their leaders are for the most part seasoned law-makers, and as the session moves into its second month there seems to be less and less likelihood that either house might be stampeded into ill-considered action.

It would be fatal for the Medical Society or its Public Policy Committee to sit back upon the apparent safety of the legislative leadership and feel that our profession has nothing to fear. Politics is a peculiar game, and the word "game" is used advisedly. It is a game that is played, with certain fixed rules and other rules more flexible, a game in the last analysis more intricate than chess, sometimes more heart-breaking than the seven-to-six score in football, like baseball in that the game is never won until the final "out" of the ninth inning. Sometimes one must wait for the opposition to make the

next move; more often offense is the best defense. Always, eternal vigilance is the first necessity.

The Committee on Public Policy is always busy, even when due to the necessities of the situation nothing may be announced concerning its work. Frequently during the next two months it will need suddenly to call upon this or that officer, this or that member of the State Society for action, for quick and perhaps hard work. So far in the session it has won the preliminary skirmishes with those who would disrupt medical practice and set public health back a generation. It has done so principally because instant response has resulted from hurried telegrams or long distance telephone calls to officers of county societies situated in key points in the state's political checkerboard. The Committee, and the staff of the Executive Office working under the Committee's direction, are deeply appreciative of the help already given. It is encouraging, it bespeaks the constant welding of our Society more closely together, and it promises added aid later when needed.

Members should bear in mind that, in the mass of legislation which the present assembly must digest, the usual opposition bills are prominently displayed—the bills for separate examining boards and broader powers for the medical cults—the bills to admit cult practitioners to tax-supported hospitals—bills to cripple the Board of Medical Examiners—bills to give chiroprodists all the privileges of orthopedic surgeons and give "cosmetologists" or beauty-parlor operators all the privileges of dermatologists.

Every member should help strengthen the backbone of his representative and senator against the enactment of any such legislation. This can be done in part by friendly letters, better by personal explanations of just what nonsectarian medicine is and just what public health work is, bearing in mind that most legislators return to their homes for the week ends.

In another month a better picture of the whole legislative situation can be drawn. In the meantime it is hoped that every member will watch his local newspaper carefully for any report of legislative activity along medical lines, will contact his local representatives, and be ready to help the Public Policy Committee whenever called.

Should This Doctor Receive a Prize?

FROM the El Paso County Medical Society comes the following communication:

"Dr. A. G. Ellis, who is Professor of Pathology at the Medical School at Bangkok, Siam, has two distinctions as a member of the El Paso County Medical Society, both probably also applying to the Colorado State Medical Society.

"In the first place, he is the most distant member of the Society.

"In the second place, the annual statement for dues is mailed to him by the secretary of the County Society on January 1 of each year, probably not reaching him until February. However, each winter his remittance for dues for the coming year arrives in Colorado Springs early in December, having been mailed the first of November.

"Is there any other member of the State Society who can match either Dr. Ellis' first distinction as to distance, or his second, his promptness in the matter of dues?"

Though not an expert geographer, the Executive Secretary ventures the opinion that Dr. H. C. Menkel of Simla, India, a member of the Denver County Society, is, in air-line distances at least, a little farther away than Dr. Ellis. There is probably room for argument in the actual number of railroad, steamship, and other miles necessary for him to travel! So far as promptness is concerned, records of the Executive Office fail to reveal Dr. Ellis' equal. May many enter a race with him!



University Hospital Relations— More Actions by Your Committee

THIS department of Colorado Medicine announced in the January issue three important accomplishments of the State Society's Advisory Committee to the School of Medicine and Hospitals, and offered a general, if brief, discussion of the scope of the Committee's work.

Since then the Committee has undertaken investigation and advice concerning several additional features of the operation of the teaching hospitals. Most of the actions of the Committee cannot yet be announced, since they are not completed, but the Committee desires to report progress in its negotiations toward better investigation of admitted patients and toward better understanding of laws governing the institutions. It is hoped that the next issue of Colorado Medicine may carry a detailed account of several important actions of the Committee.

Pending such announcements, members of the Society will be interested to learn of certain tests now under way, which Dr. Maurice H. Rees, Dean, has undertaken. Dr. Rees reported to the Com-

mittee (on January 6, 1933) that every patient admitted to Colorado General Hospital for one month beginning January 9 would be interviewed with the same financial questionnaire that has been used in the past in the Out-patient Department. This, he believed, would give the hospital executives a general picture of the type of patients being admitted. He also reported that in the near future, after all 1933 automobile licenses have been issued by the Secretary of State, a check of licenses of all cars bringing patients to the institution will be made.

The Committee again urges all members of the State Society to report to the Committee any abuses of the hospitals' privileges, so that the Committee may investigate them fully and report on them.



The Conference of County Presidents and Secretaries

FOR many years the American Medical Association has annually conducted a conference of the state medical society secretaries and state medical journal editors. The meeting is held each November in Chicago, lasting two days, and the program is always devoted to practical problems of organization and editing. Three or four of the largest state medical societies have for several years held similar annual meetings of their county secretaries.

Officers of our own State Society have hoped that such a plan might be inaugurated in Colorado. Luncheons of county secretaries have been held at the September Annual Sessions of the Society, but have been poorly attended and have served more of a social than a business purpose.

The advent of the Midwinter Postgraduate Clinics provided a new opportunity this last month. Rather hurriedly, a Conference of County Presidents and Secretaries was called, and, in addition to these, the constitutional officers of the State Society and chairmen of the State Society Committees invited.

The meeting was held in the auditorium of the Capitol Life Insurance Company Building, Denver, at 7:30 p. m. Thursday, January 19, with Dr. Frank B. Stephenson, State President, presiding. While attendance might have been greater, nine of the county societies were represented by their presidents, secretaries, or by both president and secretary, four state officers were present, and state committees were generously represented.

Those attending felt that the meeting would produce more of concrete results in county studies of economic problems, particularly through the "Iowa Plan" of caring for indigency, than any meeting that has been held in the state. Discussion of the four papers was to the point in each case, and many valuable ideas for improvement of county society activities were exchanged. A

buffet supper was served with the compliments of the Walgreen Company at the close of the conference.

It was voted that an analysis of the "Iowa Plan" as presented by Dr. Cooper be mimeographed and supplied to all county officers, so that those not present at the conference may study what were considered the most important points brought forth. This will be in the hands of county officers about the time this issue of Colorado Medicine reaches them.

Following is the program as followed at the conference:

Actions of the National Conference of State Secretaries and Journal Editors—Douglas W. Macomber, M.D., Scientific Editor, Colorado Medicine.

Discussion opened by Mr. Harvey T. Sethman, Executive Secretary.

Caring for the Indigent by County Society Contract; The "Iowa Plan"—Claude E. Cooper, M. D., President, Medical Society of the City and County of Denver.

Discussion opened by Tracy D. Peppers, M.D., Secretary, Weld County Medical Society.

Building Attractive Scientific Programs—C. E. Honstein, M.D., President, Larimer County Medical Society.

Discussion opened by M. W. Cooke, M.D., President, Boulder County Medical Society.

State Society Committees; Their Relation to the County Organization—Mr. Harvey T. Sethman, Executive Secretary.

Discussion opened by Carl S. Gydesen, M.D., Secretary, El Paso County Medical Society.

Round Table Discussion of Individual County Problems.

Those who attended the conference, and the organizations represented, included: Boulder County, M. W. Cooke, President, and Margaret L. Johnson, Secretary; Denver County, C. E. Cooper, President; El Paso County, W. A. Campbell, Jr., President, and Carl S. Gydesen, Secretary; Larimer County, C. E. Honstein, President; Mesa County, H. M. Tupper, Secretary; Northeast Colorado, E. P. Hummel, Secretary; Otero County, G. E. Calonge, President, and C. E. Morse, Secretary; Prowers County, C. T. Knuckey, President; Weld County, W. F. Spaulding, President, and Tracy D. Peppers, Secretary; State Officers, F. B. Stephenson, L. W. Bortree, L. W. Frank, and Ella A. Mead; State Committee, John W. Amesse, J. S. Bouslog, H. S. Finney and John B. Hartwell; D. W. Macomber, Editor, Colorado Medicine, and Mr. Harvey T. Sethman. The names of five others who attended escape the memory of the writer. To them he extends apologies and a request that they remind him of their attendance so that they may be mentioned in the next issue.

MEDICAL ECONOMICS

YOUR STATE COMMITTEE

The State Society's Committee on Medical Economics devoted considerable of its time in January to the preparation of material for presentation to the Conference of County Presidents and Secretaries, material which will be presented to each county society through its own officers within the next few weeks.

Weekly luncheon meetings of the state committee are being held. It is hoped that several of the suggestions for county societies and individual members will be ready for presentation in another month.

One of the important points so far brought out is that each county society, if it is to do its part in the campaign for improving the status of medical economics, simply must have a County Committee on Medical Economics, to which the state committee may turn for accurate information on economic matters in any given county, and through which the state committee may transmit its suggestions and plans. Plans that are developed by a state committee must of necessity be varied to the needs of each county which might adopt them, and this can only be done through a county committee thoroughly versed in the subject matter and willing to work.

MEDICAL SOCIETIES

This department of Colorado Medicine is set aside for reports of recent meetings, announcements of future meetings and accounts of other important activities of the county and district societies, composing the Colorado State Medical Society. Every meeting of every local society should be reported. If your society is not represented, see that your secretary reports the next one, or that some other member is appointed to the task. Other societies want to know what your society is doing.

CROWLEY COUNTY

The Crowley County Medical Society held its regular monthly meeting in the office of Dr. E. O. McCleary in Ordway, January 10. Doctors G. M. Baker and E. O. McCleary were the speakers of the evening. Dr. Baker talked on "Failing Heart in the Aged and Uses and Abuses of Digitalis." Dr. McCleary discussed "The Necessity and Methods of Relieving the Suffering." A letter from Dr. E. C. Rosenow of the Mayo Foundation stating his belief in the use of vaccines was read and discussed.

J. A. HIPPI,
Secretary.

DELTA COUNTY

The regular meeting of the Delta County Medical Society was held December 30 at the ranch home of Dr. A. C. McClanahan. Dr. Lee Bast read a paper on "Indications, Technic, and Results of Tonsillectomy." The paper was discussed by the members present. Mr. K. C. O'Dell and Mr. P. C. Edmunds, druggists, and Doctors William Fluallen and Russell Anderson, dentists, were guests at the meeting. Members and guests were delightfully entertained by Dr. and Mrs.

McClanahan, who served a midnight lunch after the meeting.

LEE BAST,
Secretary.

* * *

DENVER COUNTY

The annual meeting of the Medical Society of the City and County of Denver was held January 3 in the auditorium of Morey Junior High School. The following officers were elected for the ensuing year: President, C. E. Cooper; Vice President, John G. Ryan; Treasurer, H. W. Stuver; Secretary, O. S. Philpott; Trustee (five-year term), S. B. Childs; Censor (five-year term), J. M. Shields. Two hundred and ninety-nine members were present. The retiring president, Dr. L. W. Frank, read a paper on "Present Day Medical Economics," which all members might well read and consider thoughtfully. Pledges of harmony between the officers and members were in the air, and it is to be hoped that real cooperation will come into existence to help us all through the troublesome times ahead.

Seventy-three members were present at the second regular meeting of the month held in the auditorium of the Capitol Life Building, January 17. After the business meeting a scientific program consisting of a Symposium on Shock was delivered. Dr. T. D. Cunningham talked on "Types of Shock and Method of Production," Dr. W. T. Haggart on "Surgical Shock," Dr. W. C. Black on "Pathology of Shock" and Dr. R. W. Whitehead on "Pharmacology of Shock." The discussion was opened by Dr. Duval Prey and followed by Drs. O. S. Fowler, E. R. Mugrage, W. W. Haggart, Thad P. Sears, and R. W. Whitehead.

O. S. PHILPOTT,
Secretary.

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EL PASO COUNTY

The annual meeting of the El Paso County Medical Society was held at the Colorado Springs Day Nursery, December 14. The following officers were elected: President, W. A. Campbell; Vice President, G. B. Chandler; Secretary, Carl S. Gydesen; Treasurer, Z. H. McClanahan. Mr. Harvey T. Sethman, Executive Secretary of the State Society, was the principal speaker and gave a report on the recent meeting of State Secretaries held in Chicago.

The January meeting of the El Paso County Society was held at the Day Nursery, January 11. Members discussed the following subjects: 1. Report of the Committee on Cost of Medical Care. 2. State Medicine. 3. Medical Ethics.

CARL S. GYDESEN,
Secretary.

* * *

FREMONT COUNTY

The regular meeting of the Fremont County Medical Society was held in the Municipal Building at Canon City, December 19. Dr. Kenneth D. A. Allen of Denver was the guest speaker and gave an interesting demonstration of "X-ray Technic and Differentiation in the Diagnosis of Tuberculosis of the Lungs."

A. BEE,
Secretary.

* * *

LAS ANIMAS COUNTY

The following officers were elected at the annual meeting of the Las Animas County Medical Society held January 6. President, John R. Espey; Vice President, L. W. Newburn; Secretary-Treasurer, C. O. McClure; Delegate, D. D. Costigan.

C. O. MCCLURE,
Secretary.

NORTHEAST COLORADO

Dr. Maurice H. Rees of Denver was the guest speaker at the annual meeting of the Northeast Colorado Medical Society held January 12 at the Country Club in Sterling. Twenty-eight members were present. Dr. Rees gave an interesting talk on "Medical Education and Hospitals and Their Relation to the Public."

Officers were elected as follows: President, O. J. Schmitt; Vice President, A. E. Peterson; Secretary-Treasurer, E. P. Hummel; Censor, J. H. Daniel; Delegate, J. E. Naugle; Alternate, J. W. Kinzie. A dinner preceded the meeting.

E. P. HUMMEL,
Secretary.

* * *

PUEBLO COUNTY

The January 3 meeting of the Pueblo County Medical Society was held at the Hotel Congress. Officers were elected for 1933.

The second meeting of the Pueblo County Medical Society was held January 17 at the Congress Hotel. Dr. George A. Unfug was the principal speaker, his subject being "Bone Tumors." His talk was illustrated with lantern slides.

J. S. ROSENBLUM,
Secretary.

* * *

WELD COUNTY

Election of officers for 1933 took place at the regular meeting of the Weld County Medical Society held December 5 in the Greeley Hospital. The following were elected to office: President, W. F. Spaulding; Vice President, G. E. Nelson; Secretary and Treasurer, Tracy D. Peppers. A moving picture film on Skin Cancer, loaned by the American Journal of Cancer, was shown.

TRACY D. PEPPERS,
Secretary.

Obituary

Noah Dymenberg

Dr. Noah Dymenberg of Minturn was accidentally killed December 24 in the railroad yards. Doctor Dymenberg was born in 1864, received his medical degree at St. Paul Medical College, Minn., in 1886 and was licensed in Colorado in 1897. He had been practicing in Minturn for the past seventeen years.

Dr. Dymenberg was a member of the Medical Society of the City and County of Denver, the Colorado State Medical Society, and a Fellow of the American Medical Association. He is survived by his wife and a daughter to whom the Denver County and Colorado State Medical Societies extend their sincere sympathy.

Walter Claudius Keller

Dr. Walter C. Keller of Genoa, died at his home December 26 of pneumonia, following influenza. He was born in Smith County, Kansas, August 16, 1893. He was graduated in medicine in 1917 and licensed to practice in Colorado in 1920. Doctor Keller served in the World War and held a Majorship in the U. S. medical reserve corps.

Dr. Keller was secretary of the Kit Carson County Medical Society, a member of the Colorado State Medical Society and a Fellow of the American Medical Association. He enjoyed a large practice in his part of the state and was

loved and admired by all who were fortunate enough to know him.

Dr. Keller is survived by his wife and two children, to whom the medical profession extend their sincere sympathies.

James Weir Craig

Dr. James W. Craig died at his home in Loveland, December 8, from acute hemorrhagic pancreatitis. Dr. Craig was born in Hazleton, Pa., in 1880. He was a graduate of Denver preliminary schools and received his medical degree from the Denver College of Physicians and Surgeons in 1906. He began practice in Ault, Colo., then moved to Loveland, where he has practiced for the past nineteen years.

Dr. Craig was elected a member of the Larimer County Medical Society in 1908 and had been an active member since that time. He was also a member of the Colorado State Medical Society and a Fellow of the American Medical Association.

Dr. Craig is survived by his widow, Mrs. Bertha Jacobs Craig, a daughter, Marion, two sons, Robert and John; his mother, Mrs. Madge Craig; two sisters, Mrs. W. J. Minick and Edna M. Craig of Denver, and a brother, W. Foster Craig of Salt Lake City.

B. Frank Walters

Dr. B. Frank Walters of Durango died at Mercy Hospital, Denver, January 19. He was born in Philadelphia, Pa., in 1871. He received his preliminary education in Philadelphia and in 1898 was graduated from the University of Pennsylvania. Before coming to Colorado Dr. Walters practiced in Sioux City, Iowa; Minneapolis, Minn., and Philadelphia. Dr. Walters had practiced in Durango since 1927, specializing in eye, ear, nose and throat work. He was a member of Denver and San Juan County Medical Societies, of the Colorado State Medical Society, and a Fellow of the American Medical Association.

WOMAN'S AUXILIARY

During the year it is attempted to hear from each chairman on her particular work. Here follows an article on Hygeia, by Mrs. George Gillen, Hygeia Chairman of Colorado:

The Woman's Auxiliary has, for several years, been asked by the House of Delegates of the American Medical Association, to assist them in their efforts to educate the lay public in preventive medicine.

The medical profession has long recognized the need of the people for preventive medical information and have selected Hygeia as a medium.

We are beginning this year's campaign in Colorado and have asked the president of each auxiliary to appoint a Hygeia chairman, who will carry out our program in her district.

Our aim is to put Hygeia in schools, club libraries, before legislatures, as well as in the office of doctors and dentists.

The people, as a whole, are well informed on a great many subjects, and we feel the reason they are not better informed on this subject is

because they have not had the proper information at hand. We feel that Hygeia can give this information, as well as the progress the medical science is making.

Is it not true that one must be physically fit, as well as mentally and morally fit to get the most out of life? One cannot break the laws of nature and remain well, merely by thinking they are well, or pretending they are; because of this fact, we feel we cannot escape our obligations in helping to find a way to a better physical, mental and social life for all children.

The Auxiliary has, in past years, given a number of free subscriptions to schools and organizations and intends to continue this, as much good can be accomplished through the teacher.

We would appreciate it very much if you would give us your subscription, or renewals. We receive a commission from these, which is used to put Hygeia in schools.

DENVER

At the January meeting of the Denver County Auxiliary, it was voted to have a book shower at the next meeting, each member bringing a book, for the Traveling Library which was originated some years ago by the Denver Woman's Club and is now sponsored by the Colorado State Library and Federated Women's Club. This Traveling Library takes boxes of fifty or sixty books each to remote parts of Colorado where people do not have access to library facilities. The Auxiliary will donate one new book also, and besides it was voted to include copies of Hygeia.

Since next meeting is the annual President's Day and a number of visitors from other clubs is expected, it was decided to order a number of pamphlets of the excellent article, "Go to Your Doctor Before He Comes to You," for distribution on that day.

Dr. Claude Cooper, president of the Denver County Medical Society, talked on "Economic Aspects of Present Day Medicine" and included excellent advice on how we best can help the profession in these dire days.

OTERO

The Woman's Auxiliary to the Otero County Medical Auxiliary have been active in many ways. One of their most outstanding features is the health talks given in all the Parent-Teacher Associations. This month Dr. C. E. Morse, Dr. A. S. Hansen, and Miss Velma Brennaman, school nurse, will have charge of these talks.

At one of their earlier meetings, they were hostesses to the wives of the doctors who attended the meeting of the Arkansas Valley Medical Society which was held in La Junta. Mrs. O. D. Groshart, president of the Otero County Auxiliary, welcomed the visiting ladies and introduced Mrs. B. Franklin Blotz, State President.

This month, Otero held a one o'clock luncheon at the Park House in honor of Mrs. Geo. Sorenson, who has been an active member of the auxiliary for several years, and who with her husband, of the Santa Fe Hospital staff, plans to move to Los Angeles in the near future. After luncheon, the group went to the home of Mrs. R. S. Johnston, where a business and social meeting was held. The response to the roll call was made by each member giving an abstract of some medical current event. Mrs. Grace Finney gave some extremely interesting excerpts from her scrap book, in which she told of the first Pan American Medical Congress held at Washington, D. C., which

she attended in the year 1893. She also read descriptions of exhibits at the world fair in Chicago during the same year. Mrs. Finney then read "The Doctor's Dream," a classic which could be fully appreciated by the wives of physicians.

COLORADO TUBERCULOSIS ASSOCIATION

The annual meeting of the Colorado Tuberculosis Association, the Denver Sanatorium Association and the El Paso County Sanatorium Association will be held February 17. The Denver County Medical Society will join in the evening meeting at 6:30 o'clock at the University Club in Denver. The speaker will be C. Rufus Rorem, Ph.D., Associate Director of Medical Services of the Julius Rosenwald Fund, Chicago. Dr. Rorem is a member of the Research Staff of the Committee on the Cost of Medical Care, and will speak on the report of this committee.

Anyone interested is welcome to attend this meeting. Dinner is \$1.00. Reservations may be made by calling Dr. Arnold Minnig, Keystone 1571, or the Colorado Tuberculosis Association. Tabor 1962.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The American Board of Obstetrics and Gynecology proposes to hold the first of a series of annual dinners for Diplomats of the Board and their friends on the first day of the Scientific Session of the American Medical Association meeting in Milwaukee, at which time the successful candidates from the examination of the day before will be introduced in person, one or more addresses will be made by officers of the Board and a Round Table Conference and general discussion of the activities of the Board will follow. Diplomats expecting to be in attendance at the Scientific Session of the American Medical Association are urged to make early reservation for this subscription dinner as early as possible through the office of the Secretary of this Board. Further announcements will be made through the Journal of the American Medical Association and the American Journal of Obstetrics and Gynecology.

The next written examination and review of case histories will be held in cities throughout this country and Canada, where there are Diplomats who may be empowered to conduct the examination on April 1, 1933.

The next general clinical examination is to be held in Milwaukee on Tuesday, June 13, 1933, immediately preceding the annual session of the American Medical Association. Reduced railroad rates will apply.

For further information and application blanks, address the Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Pennsylvania.

THE SOUTHEASTERN SURGICAL CONGRESS

Announces Its Fourth Annual Assembly
March 6, 7, and 8, 1933, Atlanta Biltmore Hotel

The following prominent internists and surgeons will appear on the program:

- Dr. Tom G. Orr, Kansas City—"The Essential Factors in the Treatment of Acute Peritonitis"
- Dr. Walter E. Sistrunk, Dallas—Subject to be announced later.
- Dr. C. W. Roberts, Atlanta—Subject to be announced later.
- Dr. Geo. W. Crile, Cleveland—"Peptic Ulcer"—Lantern Slides (Clinic).

- Dr. W. D. Haggard, Nashville—Toastmaster (Clinic).
- Dr. Chevalier Jackson, Philadelphia—"Diverticula of the Esophagus and Hypopharynx." Lantern and Motion Picture Demonstration.
- Dr. Charles Bagley, Jr., Baltimore—Subject to be announced later.
- Dr. W. E. Lower, Cleveland—"The Various Functions of the Testes; an Experimental and Clinical Report."
- Dr. Hugh Cabot, Rochester—Subject to be announced later.
- Dr. Hubert A. Royster, Raleigh—"Sidelights on the pathology of Appendicitis."
- Dr. E. W. A. Ochsner, New Orleans—"The Relative Value of Sclerosing Agents in the Treatment of Varicose Veins."
- Dr. Dean Lewis, Baltimore—"Muscles, Nerve and Blood Vessel Injuries of the Extremities." (Clinic).
- Dr. Carl A. Hedblom, Chicago—"The Diagnosis and Treatment of Tumors of the Thorax."
- Dr. W. Wayne Babcock, Philadelphia—"The Vaginal Approach to the Peritoneum."
- Dr. W. R. Houston, Augusta—Subject to be announced later.
- Dr. Curtrice Rosser, Dallas—"Problems Confronting the Proctologist."
- Dr. Irvin Abell, Louisville—"Tumors of the Breast."
- Dr. Robert Wilson, Charleston—"The Fundamentals of Surgery—a Medical Viewpoint."
- Dr. Cecil Rigby, Spartanburg—Subject to be announced later.
- Dr. Russell O. Lyday, Greensboro—"Surgical Progress from a Physiological Standpoint."
- Dr. Vilray P. Blair, St. Louis—
- Dr. James Barrett Brown, St. Louis—"Cancer of the Mouth."

B. T. BEASLEY, M.D.,
Secretary-Treasurer.

CAN A SECRETARY GO TO HEAVEN?

- If a secretary writes a letter, it's too long.
- If he sends a postal, it's too short.
- If he doesn't send a notice, he's lazy.
- If he attends a committee meeting, he's butting in.
- If he stays away, he's a shirker.
- If he duns the members for dues, he is insulting.
- If he fails to collect the dues, he's slipping.
- If he asks for advice, he's incompetent.
- If he does not, he's bull-headed.
- If he writes his reports complete, they're too long.
- If he condenses them, they are incomplete.
- If he talks on a subject, he is trying to run things.
- If he remains quiet, he has lost interest in the meeting.

Ashes to ashes,
Dust to dust,
If others won't do it,
The secretary must.

—The Wards, over WBAP, quoted by Journal of the Michigan State Medical Society.

Boiling actively for five minutes will destroy the toxin produced by the *Bacillus botulinus*.

Take this Journal home to your wife.

Colorado State Medical Society Officers, 1932-1933

President: Frank B. Stephenson, Denver.

President-elect: Gerald B. Webb, Colorado Springs.

Vice Presidents: First, Walter W. King, Denver; Second, Lawrence L. Hick, Delta; Third, B. Franklin Blotz, Rocky Ford; Fourth, William P. Gasser, Loveland.

Constitutional Secretary: Lorenz W. Frank, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone KEystone 0870.

Delegates to American Medical Association: Senior, Crum Epler, Pueblo; Alternate, J. N. Hall, Denver; Junior, John W. Ames, Denver; Alternate, A. J. Markley, Denver.

<i>Councillors:</i>	<i>Term Expires</i>
District No. 1 Ella A. Mead, Greeley	1935
District No. 2 G. P. Lingenfelter, Denver	1934
District No. 3 George D. Andrews, Walsenburg (Chairman)	1933
District No. 4 W. W. Crook, Glenwood Springs	1936
District No. 5 A. L. Burnett, Durango	1937

Standing Committees, 1932-1933

Credentials: Lorenz W. Frank, Denver, Chairman; W. A. Campbell, Colorado Springs; Harold T. Low, Pueblo.

Scientific Work: G. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; James J. Waring, Denver.

Arrangements: John B. Crouch, Colorado Springs, Chairman; T. R. Knowles, Colorado Springs; John B. Hartwell, Colorado Springs.

Public Policy: Walter W. King, Denver, Chairman; H. R. McKeen, Denver, Vice Chairman; Edward Delehanty, Denver; Gerrit Heusinkveld, Denver; A. L. Beagler, Denver; W. W. Harmer, Greeley; O. D. Groshart, La Junta; L. L. Ward, Pueblo; A. C. Holland, Colorado Springs; F. B. Stephenson, Denver, ex-officio; L. W. Frank, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

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Medical Defense: W. W. Wasson, Denver, Chairman; C. F. Hegner, Denver; T. D. Cunningham, Denver.

Medical Education and Hospitals: C. N. Meader, Denver, Chairman; K. D. A. Allen, Denver; H. A. Black, Pueblo.

Library and Medical Literature: E. D. Downing, Woodmen, Chairman; Carbon Gillaspie, Boulder; F. W. Kenney, Denver.

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Medical Economics: C. E. Cooper, Denver, Chairman; B. B. Blotz, Rocky Ford; Philip Hillkowitz, Denver.

Necrology: G. M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; Lee Bast, Delta.

Special Committees, 1932-1933

Postgraduate Clinics: Maurice H. Rees, Denver, Chairman; O. M. Gilbert, Boulder; C. E. Harris, Woodmen; Nolie Mumey, Denver; G. E. Cheley, Denver.

Workmen's Compensation Affairs: A. S. Cecchini, Denver, Chairman; L. G. Crosby, Denver; W. R. Waggener, Denver; J. D. Carey, Fort Collins; Lanning E. Likes, Lamar; D. H. O'Rourke, Denver; John Andrew, Longmont.

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Advisory to the School of Medicine: John S. Bouslog, Denver, Chairman; N. A. Madler, Greeley; C. O. Giese, Colorado Springs; C. E. Sidwell, Longmont; T. D. Cunningham, Denver.

State Registration Fee: R. W. Arndt, Denver, Chairman; Frank E. Rogers, Denver; T. E. Beyer, Denver.

Constituent Societies Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Cryslar, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, G. W. Larimer, Salida.

Crowley County—Second Tuesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, R. B. Porter, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, J. M. Lamme, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—First Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Thursday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

President, F. L. Beck, Cheyenne Vice President, J. L. Wicks, Evanston
Secretary, Earl Whedon, Sheridan President-elect, H. L. Harvey, Casper
Treasurer, Evald Olson, Meeteetse
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Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:
EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

The Sleeps— My Baby Sleeps

IF ANYTHING could convince one of the dangers of Christian Science, it would be the pitiful sight the writer witnessed a few years ago. The scene occurred in a home of simple trusting misguided people, honest, but not medically educated. On the bed propped up with several pillows was a little child, on whose lap was spread a large family Bible, on the open pages of which rested two little white hands. Playing on the floor were two smaller children. The mother was seated at the foot of the bed. At the side of the bed sat a woman repeating "God loves you—God loves you." The child was dead and rigor mortis had set in. The messenger of death had visited that home at least three hours before—yet the woman at the bedside was not aware of the fact that death had occurred. Death was caused by diphtheria undiagnosed by an ignorant practitioner. Both children were exposed, and only the use of antitoxin saved the lives of these little ones.

How long shall little ones be sacrificed by allowing misguided "healers" to treat diseases as fatal as diphtheria when they do not have any medical training even to recognize such a disease? God never intended human sacrifices on the plea of "religious liberty." That people have a right to believe as they please on religious questions is an American right, but only so far as these beliefs do not lead to the interference with the rights of others.

No religious freedom should deliberately allow deaths of innocent children and the

scattering of contagious diseases throughout our fair land. Either these practitioners should be compelled to take a course in diagnosis of contagious diseases and be able to recognize such diseases as diphtheria, small pox, scarlet fever, etc., or they should be prosecuted for manslaughter.

Abscess of the Tongue

LOOKING back over thirty years of practice confined to diseases of the eye, ear, nose and throat, the infrequency of encountering abscess of the tongue is very noticeable.

Under the conditions of heat, moisture, and every chance for the entrance of germs through air and by food, it has been a cause for wonder that more cases do not occur. The danger of slight openings in the covering of the tongue due to sharp edged teeth or accidental bites tends to increase the chance of infection and with this infection the formation of abscesses. Nature must have provided some wonderful plan to prevent these conditions from producing abscess in the human tongue.

The early diagnosis of this infection is often confused with middle ear infections, tonsillitis, beginning diphtheria, septic sore throat and peritonsillar abscess (quinsy). When we remember the nerve distribution to the tongue, some causes for error in diagnosis are understood. Pain which extends to all parts supplied with sensation by the fifth nerve, especially to the region of the ear, is often very severe in character. Pain in this case is conducted to the ear and temporal region by the lingual nerve and

from it to the other branches of the inferior maxillary nerve, especially the auriculo-temporal.

In the beginning the symptom of pain is very misleading. The voice in a few hours leads one to believe that the trouble is quinsy when it is abscess of the tongue. The ears look normal; the tonsils and pharynx are not giving any evidence by which the real trouble can be located. Only the slight resistance of the tongue to the tongue depressor points to the location of the real cause. Most patients complain of either pain in the ears or in the frontal region. In the course of a few hours an increased flow of stringy mucus occurs, and then the pain begins in the base of the tongue, as most abscesses occur in that part. The lymphoid follicles are situated mostly in the back of the tongue between the epiglottis and the circumvallate papillae. Infection most often occurs in this region rather than in the thinner parts of the tongue. The finest instrument to detect the location of the infiltration which precedes the abscess formation is the delicately educated index finger passed over the entire tongue. If the eye is depended upon to discover changes in a laryngeal mirror, it will be too late and someone else will be treating the case.

Remember there is such a thing as abscess of the tongue when the patient complains of pain in the ear and yet the ears show no evidence which you can believe would cause pain in them. In several cases seen, one outstanding feature has been the very unpleasant odor of the pus produced by the abscess; this odor is only equalled by organisms of the gas forming group; once encountered—never forgotten.

Thrombo-angiitis obliterans has been treated by foreign protein with notable palliative effects. It tends to relieve pain and improve the peripheral circulation. Healing of open lesions is thus facilitated. Little or no effect has been noted in cases presenting claudication or extensive gangrene. The treatment has aided in carrying patients through critical periods pending other procedures.

WYOMING NEWS NOTES

Following the usual monthly dinner of the staff of the Sheridan Memorial Hospital on January 10, the following officers were elected for the year as officers of the staff and also of the Sheridan County Medical Society: President and Chief of Staff, Dr. Simeon Wood Johnson; Vice President, Dr. Enos Goble Dennison; Secretary, Lawrence Cornelius Meredith. At the staff meeting Dr. P. M. Schunk presented a very interesting case of narcolepsy and cataplexy and discussed this case in an interesting and instructive manner. The patient was above average intelligence and by his clear answers to questions put by the doctors present helped to bring out the interesting points in his case.

Dr. J. E. Carr was recently selected by the board of County Commissioners to be County Physician for Sheridan County.

Third Annual Health Conservation Contest

Winning and honorable-mention cities in the 1931 Inter-Chamber Health Conservation Contest, sponsored by the Chamber of Commerce of the United States with the cooperation of the American Public Health Association, were announced as follows:

In the population group of more than 500,000, the winning city was Milwaukee, and honorable mention cities were Baltimore, Detroit, Philadelphia, Pittsburgh, and St. Louis.

In the population group of 250,000 to 500,000, Rochester was the winning city, and honorable mention cities were Cincinnati, Kansas City, Minneapolis, Newark, and Toledo. In the 100,000 to 250,000 population group, New Haven, Conn., was the winning city, and honorable mention cities were Grand Rapids, Hartford, Syracuse, Utica, and Yonkers. In the 50,000 to 100,000 population group, Evanston, Ill., won, with East Orange, N. J., Harrisburg, Pa., Kenosha, Wis., Pasadena, and Racine, Wis., the honorable mention cities. In the 20,000 to 50,000 population group, Brookline, Mass., was the winning city, and honorable mention cities were Alhambra, Calif., Maplewood, N.J., and Watertown, N.Y., Newburgh, N. Y., and Orange, W. Orange, N. J.

For the group under 20,000, the winning city was La Salle, Ill., and the honorable mention cities were Chestertown, Md., Lodi, Monrovia, Palo Alto, Calif., and Shorewood, Wis.

THE PRIVILEGE OF DEATH*

JAY G. WANNER, M.D.
ROCK SPRINGS

We hear much of the individual's "right to live," but little is offered on his "right to die." The right to live apparently starts with the first spark of life during conception in utero. Laws and social custom demand that this life be protected. Here at the very beginning of life, exceptions occur—exceptions greatly involving the medical profession. If pregnancy endangers the life of the mother, the medical attendant, under certain ethical laws of consultation, may with his colleagues find it necessary to terminate and sacrifice this unborn life to save that of the mother. At this point an unwritten law involving social custom throughout the ages makes its entrance and denies the "right to live" to certain ones among the unborn.

If on the other hand the mother or father of this unborn child suffers from an incurable and hereditary disease, there is no law written or unwritten, and no social custom, which gives this unborn "the right to die." Though he suffers through his life mentally or physically he must be born, treated, and cured if possible.

If a hideous monstrosity be born, no sanction is given as to its right to die. Fortunately nature kindly intervenes in the majority of these cases and terminates life within a short time. Medical ethics and social laws, however, do not permit the medical attendant to either negligently or willfully elect for this monstrosity "the privilege to die."

As an example, what would be the position of the medical attendant at the birth of a monstrosity that might be hideous to look upon, always mentally an imbecile of the lowest order, and which might live for many years but for one thing, we will say, an imperforate anus. By performing a simple colostomy and giving the monstrosity an artificial anus, its life will be prolonged. Without operation it is condemned to death within a few days. Such cases are on medical record. To operate or not to operate is the

question. The physician in charge of this type of case shoulders a grave responsibility. His role is that of judge, jury, savior, or executioner.

That this problem is being more and more brought to the attention of the medical and legal professions cannot be denied. It is not uncommon to read in the daily press of so-called mercy killings, carried out usually by some member of a family who no longer can watch a lingering painful death of a loved one afflicted with an incurable disease and begging for a gun or poison to end his suffering.

Here again major points present themselves. That this problem is one for advanced thinkers is evident. Within the next two or three generations members of the medical and legal professions will be called upon to regulate euthanasia or so-called easy death. Dr. C. K. Millard of England, a stout champion of euthanasia, in a recent article in the *English Review of Reviews*, explains as follows:

"Our proposition is merely that individuals who have attained to years of discretion, and who are suffering from an incurable and fatal disease, which usually entails a slow and painful death, should be allowed by law—if they so desire—to substitute for the slow painful death a quick and painless one. This, we submit, should be regarded not merely as an act of mercy, but as a matter of elementary human right. The usual method of administering of euthanasia would probably be a lethal narcotic draught, which might be given in a special utensil, the "lethal cup." A prescribed procedure would have to be followed, which would include an express statement by the euthanasior as to the object of the draught, and a direct question to the applicant as to whether he was quite sure that he wished to anticipate death. If his answer were in the affirmative, the lethal cup would be handed to him or put within his reach. In cases where the patient is unable to swallow, the lethal dose could be administered hypodermically. An independent and official wit-

*Read before the Wyoming State Medical Society at Rock Springs, July 19, 1932.

ness would need to be present, and only persons of a certain status, as magistrates, clergymen, or doctors. It is obvious that many ramifications would enter into the moral, legal, and religious responsibilities of such a procedure and that great care would have to be used to guard against unscrupulous individuals who might attempt to carry out some plan for their own gain."

If we see any animal in terrible suffering with no hope for its recovery, we think nothing of humanely ending its misery in a speedy fashion. Yet many times as we go through our hospitals we see numerous patients enduring a lingering tortuous death with no hope for relief until Nature takes its course.

The writer makes no pretense of including in this category suicide of the ordinary nature. This is a different problem and perhaps more in the realm of the neurologist or psychiatrist than that of the medical body as a whole.

As before mentioned, many safeguards in the way of medical consultants must be employed. The patient's mental age, prognosis, and degree of mental and physical pain must all be carefully weighed before granting him the permission to accept the happy release. A patient must be guarded from a premature decision, as severe pain may cause a temporary mental instability which might influence his choice.

That the medical profession would be held up to sharp criticism is also obvious, as one often hears of a miraculous cure through the medium of some semi-religious or pseudo-medical cult. The old phrase, "while there's life there's hope," is so thoroughly inculcated into human thought that it is easy to blind one's self to the real issue at hand.

Euthanasia, or painless death, vitally affects the medical and legal professions, and these professions will not always be able to bury their respective heads in the sand and pretend not to see.

The indiscriminate dispensation of samples without removing the label encourages self-medication. Such practice is too evident for discussion. Remove the label!

Unprecedented Rise in the Cancer Death Rate

While health conditions in general have been extremely favorable during the last two years, the death rate from cancer has been rising sharply. This is one of the very few unfavorable developments in the public health in recent years.

It is true that, for a long period of years the cancer death rate, both among the many millions of policy holders of the Metropolitan Life Insurance Company and the general population of the country, has been increasing. But the rise has been slow in each group. During the twelve-year period, 1919 to 1930, the difference between the minimum crude death rate for the insured (67.0 per 100,000—registered in 1919) and the maximum (79.5—registered in 1930), was 18.7 per cent. In strong contrast with this relatively slow average rise of almost 1.5 per cent per annum in the death rate, there is shown at the end of 1931, a 7.4 per cent rise in a single year; and reports for the first half of 1932 show a further rise of 9.5 per cent over the rate for the like part of last year. If deaths from cancer continue to occur at the present rate throughout 1932, the cancer death rate among Metropolitan Industrial policy holders will have increased more than three-fourths as much, in two years, as it did in the preceding twelve years back to 1919.

Some forces must have been at work since the beginning of 1931 to cause a marked acceleration in the number of deaths reported from cancer. It is by no means assured, as yet, that the actual increase in 1931 and 1932 has been as sharp as the figures indicate. There is always the possibility that part of the rise resulted from more accurate diagnoses. An eminent authority on cancer believes this to be true. Many more cases are undoubtedly being discovered through laboratory findings, operative procedures, and autopsies which are being made more often now than ever before.—Stat. Bulletin, Metropolitan Life Insurance Co., 13:4—6 (July), 1932.

Take this Journal home to your wife

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Vol. VI

February, 1933

No. 2

POVERTY and tuberculosis go hand in hand; so runs the doctrine preached for a score of years. Some even regard the tuberculosis death rate as a rough barometer reflecting the fluctuations in the economic state of the people. For more than three years hard times have blighted the country; few have escaped its evil effects. Yet the tuberculosis mortality rate continues to decline. How can this paradox be explained? No authoritative answer is available and none would be so rash as to predict a continuation of the downward trend. But a consideration of some of the influences that undoubtedly play a part in this phenomenon may suggest what steps in the future must be taken to sustain the present favorable trend.

EFFECT OF DEPRESSION ON TUBERCULOSIS

The tuberculosis death rate for 1930 in the United States reached the low point of 71.5 per hundred thousand population. Unofficial but reliable estimates for 1931 show a rate of approximately 67 per hundred thousand. The Metropolitan Life Insurance Company calculated that at the end of the third quarter of 1932, the tuberculosis death rate had declined 6.9 per cent as compared with the like period of 1931.

Deaths from tuberculosis come mostly from that group who have had the disease for some time. Among the tuberculous population at any given time there are always some whose fate hangs precariously in the balance. A slight downward push on the scale such as hunger or worry, is likely to bring the struggle to a premature end. Apparently there are not enough such "critical" cases of tuberculosis among the "new-poor" to affect appreciably the mortality rate.

We are not certain however that hard times are not increasing the morbidity of the disease. Assuming the average expectancy of the consumptive to be five years, the present effects of deprivation, even though temporary, may shorten that expectancy. Furthermore, our present understanding of the manner in which tuberculosis begins and develops, justifies us in assuming that environmental influences often determine whether or not a child with early lesions will later develop the destructive adult type. And many children now heavily infected but not yet labeled "tuberculous" are suffering deprivation. Thus the toll of the enemy may be so "absorbed" in

the years to come as to show no definite "hump" in the mortality curve.

Aside from these probabilities why has the mortality rate not yet reflected the effect of poverty? While poverty and tuberculosis are closely related, there is nothing about poverty *of itself* that favors the disease. The sole, direct cause of tuberculosis is the tubercle bacillus. Without infection by that specific germ, even Job's turkey could not possibly develop phthisis. But the *by-products* of poverty are the active allies of the enemy.

One such by-product is faulty nutrition. We have not thus far permitted this by-product to overwhelm us. Luxuries, comforts, and even self-respect may have to be sacrificed by many people, but old-fashioned starvation for the sheer want of bread is a disgrace we are determined not to suffer. Nor is the nutritional quality of food being sacrificed to any great extent. During the war, the hunger of European peoples was appeased by filling their bellies with food substitutes of poor nutritional value. Not so in the present crisis. True, the consumption of milk has decreased somewhat, but on the other hand, the cheap price of butter has enlarged sales of that article at the expense of butter substitutes. Meats, vegetables, and fruits have dropped to a price level that discourages the competition of foods of lesser nutritional value. Allowing for the concessions many families are making, we still may safely assume that no widespread harm has as yet been wrought because of poor nutrition.

Another by-product of poverty is the crowding

together of families, which in turn favors the ready transfer of the tubercle bacillus from the sick to the well. Domiciliary crowding has not yet been severe. The inhuman huddling of several families in quarters designed for one, as was so common during the war, has been mitigated by lowered rentals. Incidentally, the experience in German cities in the post-war period indicates that food shortage rather than crowding is the significant factor in causing an increase of the rate. During the blockade when food supplies were cut off, the tuberculosis death rate rose to unprecedented heights. When the blockade was lifted this rate declined precipitately to its former level, though the housing shortage continued as before.

A third by-product of poverty is shattered family morale. "What's the use!" is the attitude of the discouraged family. Slovenly habits creep in. Why wash the dishes carefully? Why not spit on the floor? Why keep the appointment with the doctor? Cheerlessness and numbness subtract their toll from one's capital of resistance. Deplorable situations are evident, but in the aggregate we have kept our courage to the sticking point, and the pessimism that now presides in many households has not yet become chronic.

Momentum of the Movement

An important factor responsible for the continued decline of tuberculosis deaths is the cumulative effect of the tuberculosis movement. For a score of years, educational propaganda has been rolling up its force; its momentum has been slackened only slightly by the present pot holes in the highway of progress. Knowledge acquired in the past has not lost its power; our respect for tuberculosis has not lessened; habits and practices acquired in the good days continue to function in the bad.

But perhaps the most pertinent answer to the question as to why the death rate has not taken an upward turn is to be found in the tuberculosis fighting machinery that is now functioning. It is, of course, inadequate, but in no previous depression have we been so well equipped. Some eighty thousand patients are at the moment occupying sanatorium beds, which means not only that eighty thousand persons are being given their chance, but also that as many potential foci of infection are removed from the susceptible community. More thousands, graduates from tuberculosis institutions, are exerting their wholesome influence wherever they may be. The sanatorium is doing "business as usual," in fact, almost 1,000 new beds have been added (in the U. S. A.) during the past year. Nor has there been an appreciable lessening

of clinic and medical activities. Greater skill and precision in diagnosis and treatment are practiced by the doctor than ever before. Health department budgets in several places have been curtailed, but without seriously lessening the efficiency of the service rendered. Public health nurses' salaries have suffered reduction but not the quality of their work. Tuberculosis associations have trimmed their sails, but the educational and publicity work goes on unabated. Research has not stopped, and demonstrations gaily carry on.

Control Machinery Works

The machinery has clicked on despite the depression. The fact that this "variable" has *not* changed (except for the better) whereas the other traditional variable, namely, the economic factor, has changed, and that, in the face of this, the tuberculosis rate has not increased, is indirect but persuasive proof of the efficacy of our present method of attacking tuberculosis.

Epidemiology teaches that human skill apparently avails little during the height of an epidemic. But when the foci of infection begin to decrease in number, organized effort bears fruit and accelerates the decline. When the disease foci are finally reduced to a minimum number, the epidemic is "under control." Has the age-old epidemic of tuberculosis reached the point where the active cases are so few that the disease may be "controlled" regardless of unfavorable circumstances?

Whatever the answer,—the danger of overconfidence must be avoided. Human nature, notoriously fitful and fickle, must be reckoned with. Experience shows that a populace plagued by a disease enemy may be roused to such a pitch as to depress the danger to a vanishing point. When the threat lessens, interest lags, vigilance relaxes, and then the enemy sweeps once more into the unprotected ranks. For this reason the history of small-pox since Jenner's time is one of sporadic recurrences alternating with periods of quiescence, but never of complete conquest.

The anti-tuberculosis crusading spirit of bygone days drew its power chiefly from deep emotion. As the stimulating reminders of the disease have grown fewer, interest has lessened. It is necessary in these days to replace the old fire with a persistence born of intellectual understanding. For this, leadership of the medical profession is essential. The fact that the traditional and powerful contributing causes of tuberculosis may now be, and are presumably being, "neutralized" by medical skill in diagnosis and treatment, is a tribute to scientific medicine and its practitioners.

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EDITORIAL NOTES AND COMMENT

The Bogey of State Medicine

MANY physicians have become seriously alarmed as to a threatened socialization of medicine in the United States. To some extent this year is probably justified, but in other respects it may be exaggerated.

There are two principal objections to socialized control of the practice of medicine. First, it is anticipated that medical standards will be lowered. Second, the physician may be forced to accept inadequate remuneration for his services, and the reorganization of medical practice may even drive many physicians into the ranks of the unemployed.

Partly upon the ground of these objections, most physicians tend to deny the need for socialization in any degree, and to insist that all or practically all medical care shall continue to be afforded through private practice of medicine.

Numerically, physicians represent only an insignificant part of the community, and they will certainly not have a final power of decision in public policy with regard to medical care. If a real need for some considerable measure of socialization of medical practice exists, and if this need finds expression by way of popular demand through the legislatures, the physician will have to make up his mind to accept the inevitable, and his own position may then be favorable or unfavorable in proportion to the extent to which he has succeeded in directing developments rather than blindly opposing them.

The experience of some European countries seems to suggest that industrial popu-

lations need and will demand health insurance. Judging by the advertisements of practices for sale in Great Britain, it appears that those who engage in "panel practice" receive in the aggregate a not altogether unfair professional income, and that all of them still derive a considerable part of that income from private practice.

Many existing institutions, such as dispensaries, state and city hospitals, and so-called charitable hospitals, already give a great volume of medical care for which no financial return whatever is made to the physician. Socialized medicine would certainly offer the physician some systematic payment for similar services to the poorer members of the community, and under a scheme of health insurance the physician would often receive payment for medical attention such as is at present entirely unremunerative.

Illness or accident, unforeseen and practically unavoidable, often creates an overwhelming drain on the financial resources of families and individuals, and not infrequently the physician finds himself practically compelled to donate his services.

No matter how much certain forms of health insurance may develop among the so-called working classes, a great part of medical practice will always lie outside such schemes and represent what is known as private practice. Furthermore, there is good reason to anticipate that increased recognition of the need for medical care will in the long run increase rather than diminish the demand for physicians. Rather than to op-

pose blindly all proposals for bureaucratic organization of medical attention to the poorer members of the community, it may be wise for physicians, through their professional organizations, to cooperate in determining how far such developments are really necessary and how they can be organized most justly and efficiently, having due regard to the interests of all concerned. W. H. C.



Dollars and Sense

THE old yarn concerning Washington's alleged feat in throwing a dollar across the Potomac and the arresting but strictly modern soliloquy that a dollar went much farther in those bucolic times is brought home to us with increasing frequency since the nose dive of 1929.

The professional man, no less than his neighbor, the artisan or the clerk, feels the need of scrutinizing carefully every item in his usual burdensome overhead, and it is a matter of common knowledge that materials and services ordinarily considered quite indispensable are being scrapped during the emergency. Sooner or later the subject of membership in the County Society, and the annual expenditure required to continue such connection, will come before the doctor for appraisal. To emphasize the importance of a united profession, especially in this critical period, and to stress the advantages to be derived from close and harmonious action among all organized medical groups is too apparent to amplify; we readily concede such benefits. The yearly dues of county medical societies in Colorado varies from ten dollars in the smaller units to twenty dollars in the Denver Association; in all cases ten dollars must be returned for each member to the State Medical Society. Without minimizing in the least the privileges of membership in any county organization, the superior advantages of affiliation with the Medical Society of the City and County of Denver must be manifest to any unprejudiced observer. In addition to connection with the State and National bodies which membership in any county society automatically bestows, the

Denver organization offers an extraordinary inducement in its medical library. The commodious and easily accessible rooms of this institution, containing many thousand books, journals and pamphlets, assembled by far-sighted boards of trustees through more than half a century, shelter a wealth of medical literature duplicated by few cities in America. Here one may commune with the masters to his heart's content; he may ramble through the ages in any language he prefers or he may peruse the latest clinical reports in any one of the various medical specialties. The service rendered by trained librarians constitutes an added measure of importance. For the doctor who elects to forego these opportunities for keeping abreast of the times, such a decision is his own concern, but if, on the other hand, he chooses to profit by the storehouse of knowledge continually open for him, he may actually save in subscriptions to books and journals alone many times the amount of the annual dues. Let's use our library!

J. W. A.



Dr. Rorem on Medical Costs

UNDER the auspices of the Colorado Tuberculosis Association, Denver and El Paso County Sanatorium Associations, and the Denver County Medical Society, Dr. C. Rufus Rorem, Associate Director of the Julius Rosenwald Fund, has recently favored groups interested in the costs of medical care with talks upon this subject in Denver.

Dr. Rorem has well in hand an enormous fund of statistical data, particularly the findings of the Committee on the Costs of Medical Care. Other fundamental services in this country have been studied in some such systematic way. Time may elicit a workable plan of medical service based upon the studies of this Committee and justify its effort and expenditure. The Rosenwald Fund is not advocating any pet scheme, but aims toward stabilizing the income from medical practice and making it certain. Even in normal times, many people do not pay for medical care, and many do not receive the care they need. Our present service breaks down, then, on several counts:

1. The services are rendered, and the need for them occurs, independent of the patient's ability to pay.

2. All humanity should have the advantage of scientific medicine, just as it should have food. However, physicians should not be abused for its free administration any more than the grocer should give free food.

3. Medical services have no economic exchange value.

4. The purchaser does not know what he is getting, whether he needs it, and whether it is the right thing. We should guide him advisedly through public health education.

Under normal economic conditions, the people pay \$30.00 per capita annually for medical care—79 per cent by the sick or their families, 14 per cent through taxation, 2 per cent through wage deductions, and 5 per cent through voluntary contributions. Of this \$30.00, approximately \$9.00 goes to physicians, \$7.00 to hospitals, \$3.65 to dentists, \$5.50 for drugs, \$1.17 for all nursing, \$1.60 to irregular practitioners, and \$1.00 to all phases of public health work.

The Committee studied the need for medical care in 9000 people from all strata of society. Each stratum was found to need approximately the same services. However, hospitalization was greatest in the poorest and richest elements. About one-half of all persons see a doctor each year, one-fifth see a dentist, and one-seventeenth are hospitalized. Except for the unequal hospitalization just mentioned, the amount of care received was in direct proportion to the financial situation of the patient. Thus the average cost of sickness increases as the income—which on the surface appears just. But this is not the whole story: 10 per cent of families pay 40 per cent of the bills in any group considered. If the average person had an average bill, he could pay it in full at the time in 90 per cent of instances. However, the expenses are too unevenly distributed. Even if a person were to save, say \$8.00 per month, for medical expenses, he might not have enough at the time he needed it. Or when the amount becomes significant he spends it inadvisedly—as one does—and is without it in a later time of need. The aver-

age hospitalized illness costs \$140.00. About 40 per cent of the cost of the illness goes to the hospital, 45 per cent to the physician, and 15 per cent to nursing and incidentals. There are about 142,000 practicing physicians in the United States, 15 per cent of whom are working for definite salaries. The 120,000 in private practice used to have an average gross income of \$9,000, 40 per cent of which went for overhead expense. The net income of one-half the doctors was \$3,900 or less, one-third \$2,500 or less. Specialists average more than the general practitioners, older doctors more than the younger, the city dwellers more than our country colleagues.

Dr. Rorem said very little of the Committee itself, but averred that the above facts are of vital importance. On a strictly economic basis, our profession would not attract the best young men, but each feels he will be among the most successful. Perhaps herein lies one of our troubles—when a thing looks too good, enough get in to spoil it.

Self-medication may be defined as the taking of a substance of unknown composition for a complaint of an unknown nature. The 360 million dollars spent annually on patent medicines of secret composition would give \$3,000 to every reputable physician in this country. This economic waste will continue as long as people grope blindly into the unknown for help.

In conclusion, to summarize very briefly:

1. The prevailing costs of medical care are so uneven as to be beyond consistent inclusion in any family budget.

2. One source of high costs rests in the duplication of overhead costs and capital investment in medical institutions.

3. It is difficult, particularly in small communities, to have competent physicians for every need.

4. Laymen and lay organizations can not run our profession.

5. The burden of caring for the indigent sick is tossed in our lap, whereas the public should be financially responsible. We can not now gauge our fees according to a sliding scale—the rich paying for the poor.

6. Some application of the insurance

principle has in a few instances been reasonably successful in paying the doctor, hospital, and nurse. Uncomplicated pay-the-hospital plans need not disturb the personal doctor-patient relationship which we still maintain is indispensable for satisfaction. Such plans take many persons out of the indigent class, lessening thereby the need for philanthropy and invasion of public funds. This is not State Medicine, which in the strictest sense implies utilization of money from taxation.

7. Even if 90 per cent of people were without the bounds of indigence, there would as yet be plenty of worry with the remaining 10 per cent.



Appendicitis Death Rate

THE death rate from appendicitis, as indicated by reports from many hospitals, has increased immensely during the recent months—another by-product of the depression. Self-medication, catharsis and delay in acute abdominal symptoms are responsible. Certain reports from general hospitals indicate the incidence of rupture as high as 54 per cent of cases.

Particularly at this critical time should physicians warn the people to call for competent medical consultation in cases where abdominal symptoms persist beyond a few hours.

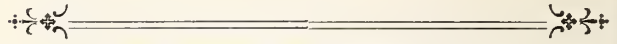


Liver Function

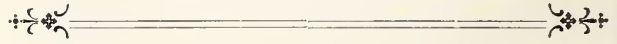
THE chief function of the liver is detoxication. Bile acts as a bactericide, digestant, and laxative. Glycogen is made and stored in the liver. Herein urea is formed from nitrogenous blood-borne waste products, later to be excreted by the kidneys. The liver converts bacterial and chemical toxins into eliminable forms and filters out senile erythrocytes.

Motion of the diaphragm above, the intestines below, and of the body itself have a massaging effect upon the liver. Hence the sluggish hepatic function of the sedentary person.

These facts, true as they are, are too infrequently considered among the reasons we should advocate for the practice of systematic physical exercise.



CORRESPONDENCE



Our Executive Secretaryship and Our Executive Offices

I HAVE been greatly impressed during the past six weeks with the very great advantages of the institution of a permanent Secretaryship and the provision of office quarters representing the home of our Colorado State Medical Society.

The great activity existing in connection with the session of the Legislature, with its consideration of our Medical School and its Hospitals, and the work incident to the study of new proposals as to registration and licensure and medical practice acts in general, has made a central office for the Society's activities—not only a great convenience, but an absolute necessity.

In the thirty days preceding this 24th day of February, fifteen State Society Committee meetings have been held in the Executive office, an average of one every other day. The Public Policy Committee has held six meetings, the Medical Defense Committee, four, besides sessions of the Publication Committee, the Advisory Committee, Workmen's Compensation Committee, Registration Fee Committee, and the Board of Trustees. Most important actions have resulted from these meetings.

The problems of our School and its Hospitals, of Medical Organization, Medical Defense, and the no less important concerns of the individual doctors are receiving a degree of attention never before possible.

Our Executive Secretaryship and our headquarters have been essential to the production of these better results.

J. N. HALL.



Remember the Society's new address: 537 Republic Building, Denver; telephone, KEY-stone 0870.

LIPIODOL INJECTION OF NASAL SINUSES*

C. E. EARNEST, M.D.

PUEBLO

The diagnosis of sinus conditions has been much clarified since the advent of iodized oils, either by injection directly into the sinuses, or by the suction method (Proetz method, or some modification of it). The radiopaque solutions used are numerous, such as lipiodol, iodipin, neosilvol, and brominized sesame oil. The value of such preparations with x-ray diagnosis is great. It will show the size and shape of the sinuses, the thickness of the lining membrane, abnormal growths such as polypi, bony tumors, dental cysts and malignant growths, the emptying power of the sinuses, and whether the ostia are patent, partially blocked, or closed.

Lipiodol has some benefit also from the amount of iodine absorbed, and the oil is non-irritating. It should, however, be used with care in conditions where iodine is contraindicated.

Methods of Injection

In the Proetz suction method, the patient is placed on his back, with the head lowered, the chin directly above the ear canal, mouth open. About 2 c.c. of warmed iodized oil is dropped into the nose and the patient in-

structed to repeat "K—K—K," thus closing off the nose. Then light suction is applied and released, more oil being dropped into each nostril alternately, thus drawing out bubbles of air from the sinuses and having the air replaced by lipiodol. Repeat the procedure twelve times. Care must be taken lest faulty filling result by this method. In our hands, this works best for the ethmoids, frontals, and sphenoids.

For injection of the antra, we find puncture and filling through a large canula or large hypodermic needle with a large syringe gives the best results. Many, however, use the natural opening with a canula for injection. In doing so, care should be exercised to avoid puncturing the base of the orbit. The frontals have been injected by many with the use of the canula. The sphenoid may be injected with the canula or by direct puncture. Under these methods it is not necessary to remove any of the turbinates or upset the patient. In fact, several came back the next day and remarked they felt better. I cannot say whether this is psychic or due to the cleansing out of the sinuses by the iodine in the oil.

The method we have been following for taking our pictures is first taking them in an upright position at about a 23 degree angle,



Fig. 1. P.-A. view, maxillary sinus without lipiodol

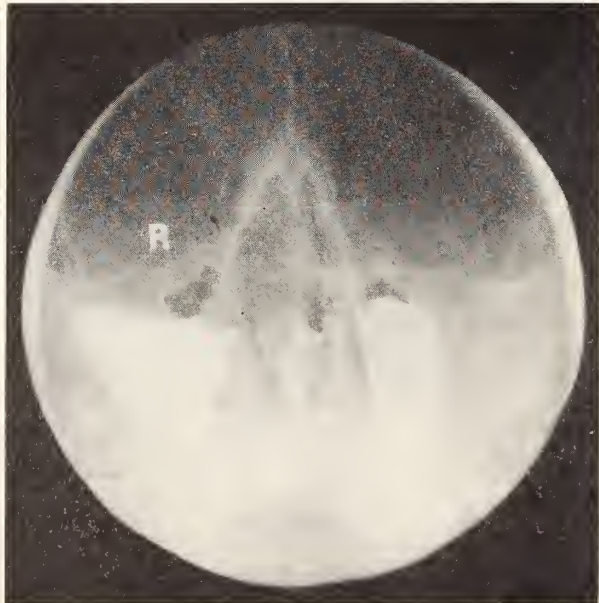


Fig. 2. Same as Figure 1 with lipiodol.

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then lateral and horizontal positions, and finally front at vertex position. The antero-posterior view gives us a good frontal view of the shape and size of the antra and frontals with a fair idea of the ethmoids and sphenoids and their location. The lateral view in the flat picture gives us the anterior and posterior view but superimposes the two sides upon each other. A stereoscopic picture in this position has given us much better information, and is much easier for us to read. The chin-vertex position is more valuable to us in the interpretation of the ethmoid and sphenoid conditions. The position of the sphenoids, some much larger than others, some much deeper than others,



Fig. 3. Same as Figure 2 after 24-hour drainage.

both may lie on one side, or there may be great inequality of the two sides. In such conditions the knowledge of their position is of inestimable value to the operator, should they be surgical.

The following case illustrates one type of condition, namely, asthma with sinusitis:

Case: A man, aged 59, came into the office complaining of asthma of twelve years duration. Clinical examination showed the nose full of polypi, the ethmoids cloudy, and the sphenoids fairly clear. In a case of this kind the Proetz method of suction is unsatisfactory because the polypi block the openings and no reliance can be placed on whether the cells fill or not. However, the chin-vertex position gives us some information on the conditions of the sphenoids and ethmoids. This case has had almost complete relief since operation under local anesthesia—the ethmoids extenuated and a Caldwell-Luc operation performed upon the antra.

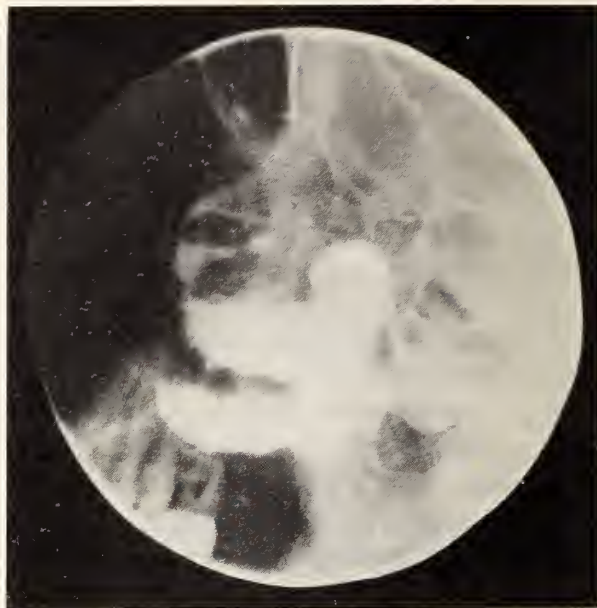


Fig. 4. Lateral view, same case.

Conclusions

1. The use of iodized oils is of advantage in diagnosis of obscure sinus conditions.
2. Instillation of lipiodol causes little or no discomfort, often benefit.
3. The upright position gives definite levels of fluid and better interpretation of the pictures.
4. Three positions should often be used for x-ray, the lateral often stereoscopically.
5. Asthmatic conditions, as well as many other systemic conditions, are markedly benefited when diseased conditions of the sinuses are relieved.

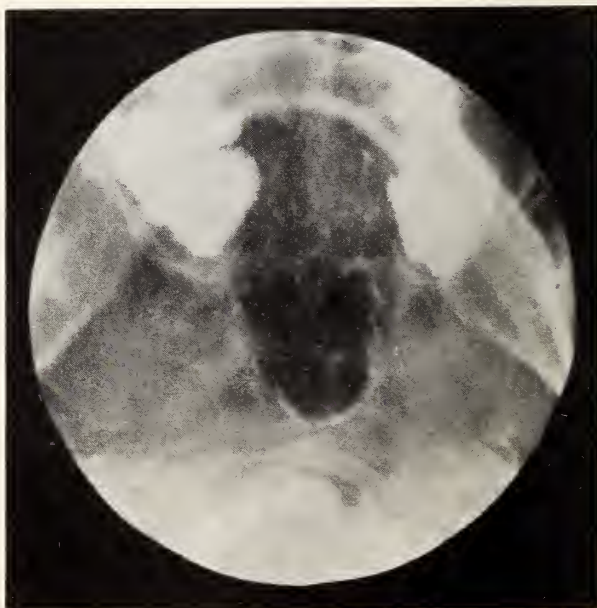


Fig. 5. Chin-vertex view, same case.

PHARYNGO-MAXILLARY ABSCESS*

FRANK E. PALMER, M.D.
STERLING

Mosher, in his presidential address before the American Academy of Ophthalmology and Otolaryngology in 1929, said, "The most interesting cases come in on Sundays and holidays." Last Christmas day I had a call from a nearby town saying that a little girl was being brought in on account of bleeding from the ear. This rather innocent sounding case proved to be an erosion of the large blood vessels of the neck due to a pharyngo-maxillary abscess and despite energetic treatment the little patient died. The subject matter of this treatise will be clarified by the citation of this and other cases:

Case 1. This patient, aged 11, first complained of sore throat on Monday, December 16. She stayed home from school that day but the next day felt better and returned to school. On the following Friday she again felt ill and came home and went to bed. She gradually became worse and on the following Tuesday night, Dec. 24, at about 1:00 a. m. was awakened with a "bleeding from the right ear." On Wednesday morning they were advised by their family physician to bring her in to me. While en route to Sterling, she had a second hemorrhage from the ear, this one being much worse than the first one. Examination at my office showed the canal filled with clotted blood. After this was cleansed out, a perforation was found in the posterior inferior quadrant of the canal at about the junction of the cartilaginous with the osseous canal. The drum was entirely intact and had a reddish cast showing very clearly that the middle ear was also filled with blood. Examination of the throat showed a bulging of the right side resembling a quinsy, and pressure on this bulging caused blood to ooze from the perforation in the external auditory canal. An external operation was immediately performed. The operation was preceded by the injection of 50 c.c. of glucose solution by vein and followed, as soon as her blood could be typed, by a transfusion. At the operation the internal jugular vein was found to be eroded and bleeding about one-fourth to one-half inch from its exit from the skull. It was ligated below the eroded area to prevent back flow and infection from traveling downward. A pack was placed to control the bleeding from above. She immediately began to improve, and it appeared she was going to make a recovery until five days later she had another hemorrhage. This time it was so severe that by the time I arrived at the hospital and stopped it, it was too late. She died while we were obtaining blood for another transfusion. Post mortem examination showed a pharyngo-maxillary abscess which had first eroded the internal jugular vein and later the external carotid artery just above the origin of the external maxillary artery.

Collections of pus in the pharyngo-maxillary fossa are always to be regarded as serious. However, if diagnosed early and properly treated the prognosis is usually good. Often it becomes very difficult to decide when these cases should be operated on account of the swelling and tenderness which precedes the formation of pus. However, according to Waldapfel of the Viennese Clinic, the tendency should be to operate too often and too early, rather than once too late. He also feels that a preventive mediastinotomy should be done at the same time. This operation was done in the following case with good results:

Case 2. A. T., a man aged 20, had a tonsillectomy on November 2. His progress was normal until the fourth day when he had a chill and began to complain of pain and swelling in the left side of his neck. This was treated in the usual way by hot compresses and throat irrigations, but he continued to grow worse. On November 13, eleven days after the operation, he was brought in to me for further treatment. Examination showed a hard tense swelling of the tissues on the left side of the neck. Nowhere could fluctuation be made out. Examination of the throat showed a lagging in the motion of the throat muscles on the left side when the patient gagged. The tonsillar fossa showed nothing unusual. Behind the posterior pillar there seemed to be a slight swelling. Examination of the larynx with a laryngeal mirror showed edema of the left arytenoid and a partial obliteration of the left pyriform sinus. A collar mediastinotomy was done following which the pharyngo-maxillary fossa was opened, revealing pus in the fossa and extending down along the vascular sheath to a level with the upper end of the trachea. The vascular sheath itself had not been invaded. The wound was packed with iodoform gauze and left open from the tip of the mastoid to the clavicle. The convalescence was uneventful and the scarring less than if it had been sewed, because there were no scars from the stitches.

Drainage of the pharyngo-maxillary fossa is made difficult on account of the danger involved. Through this fossa pass the large blood vessels and nerves of the neck. It is a pyramidal-shaped space with its base upward. Besides being the pathway for the great vessels and nerves of the neck, it also contains the blood vessels to and from the tonsils and pharynx and some lymph nodes. Some consider it as entirely separate from the retropharyngeal space, but Mosher in his description of it considered them as one. It extends upward as far as the base of the

*Read before the Sixty-Second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932.

skull and downward to a level with the hyoid bone. At this point the carotid sheath emerges from its apex and continues down into the chest. It is separated from the pharynx by the superior constrictor muscle, while its outer boundary is formed by the ascending ramus of the mandible and parotid gland. It might also be well to remember that the parotid sheath at this place is missing and that an abscess of the gland might communicate with the fossa at this point. Posteriorly is the part of the fossa ordinarily known as the retropharyngeal space, and it is bounded behind by the prevertebral muscles and fascia. In this space are the lymph nodes which form the upper end of the deep cervical chain of glands. They drain the nose and upper part of the pharynx.

Infections in the pharyngo-maxillary fossa may follow quinsy, trauma or foreign body in the pharynx, tonsillectomy, tooth extraction, sinus disease, adenitis, and tonsillitis. The last mentioned etiology is illustrated by the following case:

Case 3. E. G., male, aged 33, was first seen on April 26 in consultation with his family physician. Examination at that time showed a diffuse inflammation of the pharynx and tonsils which I diagnosed at the time as streptococcus sore throat. Two days later the larynx became involved and there was some difficulty in breathing. Six days later a beginning erysipelas was noticed. This progressed until the entire head and neck was involved. The throat infection continued through the course of the erysipelas and began to improve following recovery from it. But about one week after recovery from the erysipelas, the hoarseness became more marked and a swelling appeared in the right side of the pharynx just back of the posterior pillar. After a few days this showed indications of pus formation; it was opened and drained. The patient improved for a few days until there again appeared a bulging in the right side of the pharynx. This was accompanied by pain in the neck muscles, especially noticeable on rotation of his head. Two days later this swelling was opened from the inside and the abscess was found to extend throughout the pharyngo-maxillary fossa. Following this second drainage the recovery was uneventful.

Some of the more serious complications of a pharyngo-maxillary abscess with which I have had experience are erosion of the blood vessels with fatal hemorrhage as occurred in the first above case, thrombosis of the jugular vein with septicemia and death, edema of the larynx, and mediastinitis. A case in which a fatal mediastinitis occurred is the following:

Case 4. J. S., aged 38, a cowboy, complained of a painful swelling in the jaw and neck, and

difficulty in swallowing. Six weeks previously, a wheat beard became lodged in his throat which he was unable to extract. Since that time the trouble had gradually developed. Examination with a direct laryngoscope showed a bulging into the left pyriform sinus and edema of the left arytenoid cartilage. The temperature was 102.4 F. and the pulse 94. The patient refused a prophylactic collar mediastinotomy, and the abscess was opened and drained without sealing off the mediastinum. He was advised to keep the dressing moist and return the next day. He did not return until nine days later, at which time the swelling had extended well down to the front of the chest, and the bulging in the left pyriform sinus was more marked than at first. The entire larynx was edematous. The temperature was 103 F., the pulse 120. There was a definite history of chills during the previous three days. A collar mediastinotomy was done at this time. A large quantity of pus was evacuated from the neck and mediastinal region. The next day the patient complained of pain in the left eye. Examination showed a beginning iritis. Two days later an acute nephritis developed with suppression of urine, and death followed on the fifth day after the operation. Postmortem examination was refused, but permission was obtained to insert a trocar into the mediastinum, which revealed the presence of pus under pressure.

It is not always a simple matter to decide when pus is present, as it is usually preceded by an inflammation and swelling of the tissues. In some instances a fatal complication may arise in less than a week, hence all inflammatory swellings in the neck should be regarded with suspicion, even though only a relatively small amount are dangerous. Unilateral edema of the larynx, as I pointed out in an article eight years ago, is an indication that pus is descending toward the mediastinum. Wide fluctuations in temperature accompanied by chills and sweats are suggestive of thrombosis of the jugular vein. Hemorrhage may be suspected by the presence or sudden appearance of a large boggy mass in the pharynx. The history of tooth extraction, acute tonsillitis, sinus disease, trauma, or a foreign body in the pharynx accompanied by swelling in the neck should arouse suspicion.

The treatment, of course, is surgical. If a preventive mediastinotomy of Marshick is to be done, a free incision is made along the anterior border of the sternocleidomastoid muscle, beginning just below the tip of the mastoid and extending downward as far as the clavicle. Or, if one prefers, the T-shaped incision of Mosher, which I think is more useful in suitable cases, may be used. In any event a small incision, executed for

cosmetic purposes, is contraindicated. The T-shaped incision is made over the submaxillary gland beginning at the angle of the jaw and extending about to the tip of the chin and parallel to the jaw. At the junction of the upper end and middle third of this incision, another incision is made downward to the level of the top of the thyroid cartilage, or further if the swelling would indicate it. The facial vein must be tied and severed. The submaxillary gland can then be turned outward and upward out of its fossa, and out of the wound. It is then easy to insert the finger into the pharyngo-maxillary fossa and with a sweeping motion release the pus. After the pus is evacuated, the fossa should be explored in order to make sure that no isolated collection of pus is overlooked. Finally, the large blood vessels, the jugular and carotid, should be palpated to make sure there is no clot in the jugular. I feel if this had been done in the following case which I saw in consultation, the patient might perhaps still be living, as the diagnosis of pharyngo-maxillary abscess had been made and the abscess drained—but a thrombosed jugular vein was overlooked.

Case 5. W. K., male, aged 40, on January 2 had the lower right third molar extracted. That night he had considerable pain and the next morning there was a marked swelling of the tissues of the jaw. He was treated with hot compresses and daily irrigations of the wound, but the pain and swelling continued. On January 12, a diagnosis of pharyngo-maxillary abscess

was made by his family physician and the abscess opened and drained by an external incision. He continued to grow worse and I was called on January 14 in consultation. His hospital chart showed he had wide fluctuations in temperature daily accompanied by chills. On examination I found that he had a thrombosed jugular vein. A gloved finger inserted into the wound could readily feel the thrombosed vein down to a level of the middle of the thyroid cartilage. The patient was in extremis from his septicemia at the time of examination and died four hours later.

In summary, then, pharyngo-maxillary abscesses occur following infections of the pharynx as tonsillitis and quinsy, operations in this region as tooth extractions and tonsillectomies, trauma to or foreign bodies in the pharynx, sinus disease, parotitis, or deep cervical adenitis. Late diagnosis or improper treatment of these abscesses may lead to grave complications such as erosion of the great vessels of the neck, thrombosis of the jugular vein with septicemia, and edema of the larynx and mediastinitis. The symptoms are, in addition to sepsis, difficulty in swallowing, a painful swelling in the region of the jaw and, in the case of descending pus, unilateral edema of the larynx. The treatment is surgical, using either the T-shaped incision of Mosher or an incision along the anterior border of the sternocleidomastoid muscle—the latter incision if jugular thrombosis is suspected, or if performing a collar mediastinotomy. A small incision is contraindicated. It is safer for the patient to err on the side of an early operation than to postpone operation until you can be absolutely sure pus is present.

MEDICAL TREATMENT OF DISEASE OF THE ACCESSORY SINUSES*

F. J. PEIRCE, M.D., and F. H. PRIOR, M.D.

PUEBLO

"What do you do for Sinus?" This is a question asked with a degree of frequency somewhat astounding until one stops to realize that disease of the accessory sinuses has taken on a definite (though vaguely understood) place in the public mind. The same question is asked in a more technical way by our professional brothers whose work is of a general type—but who must,

in many instances, treat sinus cases because of lack of specialists in their locality or the inability of some of their patients to go where special care may be given. The pitiful phrase, "Once a sinus patient, always a sinus patient," has become too well spread to be comforting to the victim of sinus disease and inspires gloom where hope should be.

Medical, as much as the surgical, treatment of accessory sinus disease is governed by anatomy, pathology, and etiology. The

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degree of mechanical accessibility of the sinuses apparently controls the liability to infection. The order is as follows: The maxillary antra, the anterior ethmoid cells, the frontal sinuses, the posterior ethmoid cells and the sphenoids. The ostia, which ventilate and drain the various sinuses, are situated as follows:

Maxillary Antra—In the space between the middle and lower turbinate bone, called the middle meatus.

Anterior Ethmoids—Above and along the outer wall of the nose.

Frontal Sinuses—High in the anterior portion of the nose.

Posterior Ethmoids—High in the posterior and outer wall of the nose.

Sphenoid Sinuses—On the back wall of the pharynx, near the mid-line and well above the margin of the soft palate.

This is in no way intended to be an accurate anatomical description, but a guide for those who must treat sinus disease without having had special training.

Pathology

The following is taken from "Essentials of Pathology" by C. R. Salisbury:

"The nasal accessory sinuses consist of several bony cavities, lined with mucous membrane and communicating with the nostrils through small openings. Some cases of infection of the maxillary sinus, often called the 'antrum,' result from the penetration, through the alveolar process of the maxilla, of organisms from a tooth socket. In all other cases, the infection enters from the nose, usually during an attack of acute rhinitis.

"The most common form is not associated with suppuration in the sinus itself. The swelling of the surrounding mucosa blocks the communicating orifice and, as the air inside the sinus is absorbed, pain is produced—the so-called 'vacuum headache.' In suppurating sinusitis, there is a purulent inflammation of the mucosa of the sinus. As long as drainage is free, pain is not marked, but should drainage be interfered with, as is usual, the increasing pressure causes great pain.

"Vacuum headache is much more common in involvement of the frontal sinus, while suppuration is more likely to affect the maxillary sinus. In either type, nasal discharge, conjunctivitis, lacrimation, and photophobia are usually present and may be confined to the side of the affected sinus."

This is but a thumbnail sketch of the acute type. In chronic cases, the process has progressed until changes or destruction of the sinus mucosa has occurred, at times with constant purulent drainage and in other types, with atrophy and dry crusting.

Etiology

The causes of sinusitis are many and may be placed in three groups:

1. Diseased tonsils and adenoids, with nasal conditions that prevent proper ventilation and

drainage, such as deviated septum, enlarged turbinates, foreign bodies, and new growths.

2. As a complication in the acute diseases, as measles, scarlet fever, diphtheria, whooping cough, etc., and lastly and most important in its frequency—the common cold.

3. Constitutional changes due to poor hygiene and its resulting lowered resistance. Deficiencies in metabolism, unbalanced diet, endocrin disorders and changes due to allergy, either as food poisoning or specific sensitization.

From this brief preamble it will be seen that in the main, treatment in the acute cases is directed toward simple drainage and ventilation, and in the chronic cases, to the etiological factor which, when mastered, may permit a return of the sinus mucosa to its normal state.

While most cases of acute and subacute sinusitis recover readily with local and general treatment, there is always the percentage that will ride on to chronicity and to surgical care. Occasionally one meets an extension of an infectious process that has a fatal termination, usually in a meningitis or by an infected thrombus. Early recognition and treatment of acute sinus infection may avoid such untoward results as well as rupture into the orbit, facial fistula, or optic nerve changes. One of us observed in one winter, three frontal fistulae, all from unrecognized frontal sinus disease and one of these a terminal meningitis when first seen.

Treatment

In an acute sinusitis the patient should be put to bed and heat applied to the side of the face or to the brow, according to the location of the pain. We have found the infra-red light a most convenient and efficient aid. Occasionally a patient may prefer cold applications, which may be used. The salicylates in some form used in five to ten grain doses every three to four hours will reduce temperature and pain.

Examination of the nose will show the red, swollen mucosa of an acute infection, and this may be shrunk with cocaine and adrenalin applied on a cotton swab or a light pack. In all cases, cocaine must be used with care, and a test for idiosyncrasy should be made before a pack is allowed to remain in the nose. The solution may be cocaine 2 per cent and adrenalin three to five drops to the ounce. The membranes shrunk, the next step is the application of a detergent pack, usually one

of the silver salts in appropriate percentage—silvol 5 per cent, neosilvol 5 per cent, argyrol 10 per cent. This pack, saturated with the solution, should be inserted gently into the nose; it should be of sufficient size to cover, when in place, the entire fossa from the meatus to the posterior ethmoidal area. After a short time the patient will have a profuse discharge for which the pack will provide drainage, will sneeze with much vigor and frequency and possibly blow the packing out, but not if it is carefully placed—high up in the fossa. These packs should be allowed to stay in place for an hour, during which time the drainage will be profuse. At the end of this time, the patient may remove them. Following this, a bland oil spray should be used, for the tissues have been well depleted and will soon dry and cause discomfort. We use a spray containing menthol and iodin crystals—iodin crystals, grain one-fourth to the ounce of liquid petrolatum. It may be well to state that the silver salt pack is not used as an antiseptic but for the purpose of producing a profound phagocytosis.

Should this simple treatment fail to relieve the pressure or painful symptoms over a definite sinus area, then more direct methods should be tried. First, a small cotton applicator saturated with the cocaine and adrenalin solution is placed in the middle meatus and an attempt made to shrink the natural antral ostium, if it appears to be an antrum that is the offender, or, if the frontal is at fault the applicator should be carried forward and upward. We cannot but feel that one not accustomed to the use of the head-mirror and to viewing the nasal cavity should not attempt this procedure. Suction may be applied, gently of course, for the nasal musosa is in state of acute inflammation, and severe suction or suction used over a long period of time will produce a secondary edema and do more harm than good.

Should these measures fail to give relief when carried on periodically and carefully for from 24 to 48 hours, the case has come to the threshold of surgical intervention which may mean a simple antral washing or drainage of frontals or ethmoids by other than medical means.

It should be borne in mind that every acute coryza is a case of sinus infection. It is unreasonable to suppose that nasal infections go merely to the ostium of a sinus and stop. In fact they travel within the membrane as well as on the surface. But as the average head cold is a self-limiting affair, unless the ostium remains closed, resolution takes place as a usual sequence, ending with the thick yellow mucous discharge which gradually subsides, whereas at the onset, the discharge was watery, burning, and irritating to the alae and upper lip.

For the chronic case, one that has gone over a period of time, much study is frequently necessary. The general impression is that that all sinus disease of long standing is of necessity surgical. While this may be a general rule, there are certainly exceptions. Complete x-ray study is of immense value. Further, in the chronic case, the discharge should be studied and cultures made to determine the predominating organism. It is true that the nasal flora are usually harmless to the patient. When grown and isolated and the patient tested endermically, usually only one or two of the organisms give a positive reaction. Vaccines made from whole nasal discharge, we have found of no value. Stock vaccines of a parallel organism shown on culture, we have found of little value. Of autogenous vaccines made from a strain, isolated and endermically tested, we have found many cases that were noteworthy in their results.

Where infected tonsils and adenoids are evident, they should be removed. Patients showing chronic discharge and giving history of hay fever and asthma should be tested for their sensitizing agent. Many hay fever sufferers are the victims of a vicious circle—the sinuses, wrecked by many seasons of pollen attacks have diseased membranes which fail to function properly during the "off" season, and then comes the "on" season when the sensitization creates new activity and increases the damage already present, still further breaking down the membranes by the continuous onslaught of one edema after another. Unless arrested, the patient goes on to chronic invalidism and a hopeless life, usually a miser-

able asthmatic, with constant sinus consciousness. The one treatment for this type of case is desensitization. This requires time and patience, but helpful results are possible in skilled hands. When one considers the pollens, he must consider the food problem at the same time. An overlapping may areas at one and the same time.

The more chronic case of sinusitis requires accurate diagnosis as to the type and identification of the infected sinus or group of sinuses. This is accomplished by examination of the nasal fossae both before and after shrinking. Should the nasal cavities be free of discharge following the shrinking process, suction will frequently bring forth some characteristic discharge from the point of the offending areas. Simple x-ray will show cloudy chambers in many chronic cases, thickened membranes, new growths, tooth extension into the maxillary antrum causing surrounding inflammatory processes, destruction of the bony wall, and abnormalities in the gross anatomy. In the dry type, without fluid discharge but with much crusting, one usually finds a very thin bony structure. Pus alone does not cast sufficient shadow to be positive in the x-ray film. This fact has been experimentally demonstrated by Stauffer and others. Transillumination will, however, show darkness in both the frontal and maxillary regions. If a sinus shows darkness on transillumination, it needs thorough investigation which may indicate surgery. Further diagnostic x-ray examination may be done by the displacement method. X-ray pictures, however, may be decidedly misleading unless well taken and properly interpreted.

With the fixed rule in mind for the primary treatment of this condition, namely, ventilation and drainage, the first step is indicated. But when apparently these important functions are established and the discharge continues, purulent, muco-purulent, mucorrhoeic, sometimes bloody, better today, worse tomorrow, often accompanied by systemic disorder of a secondary type with pharyngeal drainage and reflex cough, then is the opportunity for the medical man to bring forth his best judgment—for the patient is a genuine sufferer. Were there not

so many of these patients there would not be so many suggestions as to treatment. Every rhinologist has his quota and knows how hopeless some of these cases appear.

As systematic resistance is an immense factor in such cases, whether it be child or adult, a general examination should be made and the proper dietary and medical treatment instituted.

Even though the patient may have had tonsils and adenoids removed, it is well to examine the posterior nasal space and upper pharynx for infected lymphoid tissue. One may find in many of these constantly draining cases, a perpendicular lymphoid band, immediately back of the posterior faucial pillar, this in a state of chronic inflammation, sometimes with crypts filled with infectious materials. These masses are difficult to remove surgically but are suitable for electrocoagulation.

Packs of mild silver salt solutions as described earlier, preceded by shrinking and gentle suction are much in vogue. Patients, following this measure, find some comfort for several hours, but that it is curative must not be said. Too violent and frequent suction only makes a bad matter worse. Suction, when necessary to establish drainage or as an aid in diagnosis, is well enough, but as a benefit to sufferers with an already diseased membrane, it is worse than useless. What sense there is in shrinking a mucous membrane and then swelling it up again with a mechanically produced edema is more than we can understand. This can only result in a permanent hyperplasia, though such chronicity may not have been present at the beginning of treatment.

Another definite note in the treatment of chronic sinusitis is that of A. H. Andrews of Chicago who asserted a number of years ago that sinuses ventilated and drained, continue to have persistent purulent discharge. The condition is tuberculous, and the patient should be treated with tuberculin. Following this statement which was made at a meeting of the American Academy at Philadelphia some eight or ten years ago, upon my arrival home we had a Von Pirquet done on eight patients, four of whom were considered tuberculous. Five came positive.

These were U. S. V. B. patients and we had no opportunity to treat them as Dr. Andrews advised. With four private patients, two with positive Von Pirquet reactions and two negative, we gave tuberculin over a short period of time without convincing results. Perhaps we should have continued over a longer period.

Lues naturally requires its specific treatment. In persistent cases a Wassermann should be taken. In all preliminary examinations luetic lesions should be looked for. Perforated septum and perforations or scars of the soft palate are the commoner lesions. History, as we all know, is positive in only a small percentage of these patients, so the laboratory must be relied upon. Local treatment in the specific case differs in no way from the non-specific case.

Foreign bodies sometimes find their way into a sinus, usually through trauma, and until discovered and removed will usually cause persistent discharge. Primary treatment is, of course, surgical.

Summary

Sinusitis of any type is secondary to some predisposing cause, either infectious, traumatic, or constitutional. It is not a disease per se. Medical treatment of sinusitis is as much constitutional as local. Any sinus disease of long standing calls for complete examination. Consideration of the endocrin balance as well as diet and general hygiene is a part of this examination. A careful history is of great importance.

Protein tests should be made of all cases not responding to treatment despite a lack of definite history. Cultures grown from discharges must be fractionized and tested to be of value. A vaccine from the mass of nasal flora is unscientific and usually of no beneficial effect.

Once a major sinus operation is performed, the patient becomes a medical case and in this, as in other branches of surgery, the skill of the surgeon is well shown in his after care.

PROGRESS IN OTOLARYNGOLOGY*

ROBERT LEVY, M.D.
DENVER

"Every generation adds its own discoveries in the progression to which there seems no limit" and new things constantly add to the sum total of our knowledge. While from an academic standpoint these observations are of interest, we as practicing otolaryngologists are not content unless there results therefrom an "advance toward better or ideal knowledge," which in the last analysis means progress.

Like history, progress is not contemporary. Only after the test of time, after correlation with practical proof, can scientific facts be established as such. So-called progressive findings of today may be worthless tomorrow. A review of recent otolaryngological literature or a study of rare cases is often interesting but its value as evidence of progress is questionable, and it

is not the purpose of this paper to present such a review.

An analysis of the history of otolaryngology might enable us to draw conclusions pointing to and emphasizing progressive movements. Obviously I can not go into an elaborate discussion of this subject. I shall speak only of certain mile posts that mark our progress. Both otology and rhinolaryngology showed signs of becoming specialties late in the eighteenth century, but one can hardly call them such, as we understand the term today, until about the middle of the nineteenth century. Prior to that, we find men devoting much time to special topics, such for example as anatomy of special organs by Duverney¹ (1648-1730), professor of anatomy in Paris. Following his description of the ear, there grew a new department, that of otology. An English Army Surgeon, Cleland², in 1741 interested himself in the Eustachian catheter. In 1827, through J. H. Saissy³, otology became a dis-

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tinct specialty. It was but a few years afterwards that the Vienna school through its great men, Gruber and Politzer, whom some of us knew and studied under, gave otology its present status as a recognized specialty.

The Laryngoscope

The great epoch-making mile post, however, was the discovery of the laryngoscope. Beginning with the opening of the nineteenth century, it was evident that there would sooner or later be discovered a method for seeing the interior of the larynx. Bozzini¹ (1807) was the first to give us some definite hint of such an invention, and others followed in rapid succession, but it remained for a singing teacher, Manuel Garcia, in 1855, to demonstrate with comparative simplicity and practicability laryngoscopy as we practice it today. The use of reflected light soon followed Garcia's demonstration, and the mirror and light presented such an opportunity to study hitherto unseen regions that it would have been strange indeed if otology, rhinology, and laryngology had not blossomed out at once as specialties.

Here then was the real birth of our department of medicine as a separate entity, and this marks the first great evidence of progress—progress from a hitherto undeveloped, unprecise department of medicine to one clearly demonstrable. We marvel at the progress made in these specialties when we consider that it has all taken place during one generation and within the recollection of men still living. The thrill and pleasure derived from personal contact with one of our outstanding fathers is beyond description, and I have never forgotten my several visits and interviews with Dr. J. Solis-Cohen of Philadelphia, who died only a few years ago, the little interesting side-lights imparted in these interviews, and his recollection of the many uncomplimentary remarks that he listened to concerning men who could seriously consider using in the practice of "a learned profession such a plaything as the laryngoscope."

The advances in otolaryngology are intimately tied up with progress in all other fields—surgery, pathology, and bacteriol-

ogy, but more specifically with the development of instruments of precision growing out of the principle so clearly brought to us by the laryngoscope.

Wilhelm Meyer

In 1866, Wilhelm Meyer of Copenhagen published his memorable description of adenoid vegetations in the naso-pharynx. The importance of his observations at this time can not be overestimated and constitutes an outstanding mark of progress. To remember personally the death (1896) of this great benefactor and to have contributed towards the erection of a monument in his memory is one of my greatest satisfactions.

Cocaine

I do not in any degree detract from the importance of Meyer's discovery when I declare the next great mile post in our progress was the discovery of cocaine by Koller (1884), who is still living. The impetus given to the practice of our specialty by virtue of its great help in diagnosis and treatment is incalculable. It may be appreciated by all of us but by none more than by those who practiced before its advent. Just think of cauterizing an hypertrophied turbinate with chromic acid, as I was taught to do, and following its application rapidly by an alkaline douche to alleviate the pain.

Adrenalin

Cocaine represented real progress, and adrenalin was but slightly less important. Nasal surgery dates its great vogue, almost its origin, and at any rate its present day status to these two drugs. Parenthetically one may say nasal surgery's ill repute can also in part be laid to the credit of cocaine and adrenalin.

Direct Laryngoscopy

The third great mile post that appeals to me in our progress is the discovery and development of direct laryngoscopy and all that it includes. The story of the numerous absurd, clumsy, and only slightly successful attempts to see the interior of the esophagus and the bronchi is an amusing and interesting chapter in our development.

Kirstein's name (1895) should be more closely identified with this newest and latest evidence of our advancement. He called his method of examination autoscopy, and

his autoscope was the first instrument that some of us used for direct examination of the larynx. His principles were used by many who followed him, Killian and others. Our own Chevalier Jackson made the only radical change by placing the illumination in the distal end of the instrument instead of the proximal.

Coming now from a rather abstract discussion of our progress to a more concrete consideration, we are struck by the vast amount of work that has been done, that has had its day, and that has been thrown into the discard. Many observations of more or less importance and which have left their indelible mark on our scientific progression might enlist our interest, greatly to our benefit. One should not underestimate the advantages to our specialty accruing from the union of otology with rhino-laryngology. However, even so keen an observer as Sir Felix Semon⁵ states in his autobiography that he "has never been convinced of the necessity of amalgamating diseases of the ear and those of the nose and throat."

Innumerable problems are presented to us at the present time, a solution of which is engaging the minds and activities of a vast army of capable otolaryngologists throughout the world. The uncertainty regarding these problems in the minds of many of us is almost chaotic.

Focal Infection. Allergy

At the present time the entire medical profession, in whatever general or special line the individual may be engaged, is concerned in two great questions, that of focal infection and that of allergy. We as specialists are not only expected to solve these problems to the advantage of our specialty, but we are expected to point the way to our friend the general practitioner and offer him an answer to many of his difficulties.

What a chapter! Is there any disease of obscure origin the cause of which has not been laid at the door of focal infection? Read the address of Mackenty⁶ on "Upper Respiratory Focal Infections in Some of Their Regional and General Manifestations," and wonder at the apparently well-founded enthusiasm. In spite of this, see his doubt and uncertainty

in the statement that "added research will no doubt show us that focal infection is not in itself a complete entity, but only the forefront of a vast unexplored background in which lie concealed and undeciphered the intricate problems of immunity and biologic chemistry. In other words, the infections we now see and experience are but the seeds; the background, of which we know little or nothing, is the soil."

This question interests us especially in regard to the tonsils and the sinuses. I shall not attempt to state dogmatically that they are or are not as important foci as some have asserted. I shall not attempt to discuss the questions of the tonsils at this time, for it in itself is a large enough subject to consume several hours. I shall discuss the sinuses as foci of infection, but principally from the standpoint of diagnosis. This deals somewhat with the bearing that sinusitis has on general manifestations of focal infection, especially arthritis, but aside from asserting my belief that the sinuses are much less responsible for general infection, I can not at this time discuss this in extenso by quoting authorities or relating cases. The general trend of my remarks will be easily construed as pointing to this conclusion. In speaking of suppuration of the accessory sinuses, Hofer, who will be referred to later, speaks of the frequent failures of operations on the sinuses intended to relieve headache and clear up discharge. These failures have been so numerous that the word sinus to the laity immediately establishes a phobia in the patient that is often irremovable. The experiences of friends with operation after operation arouses the greatest apprehension and fear of a similar fate. Or accepting the situation, he submits to operations or even begs for them in an attempt to obtain relief of symptoms incorrectly supposed to be due to sinus disease, and so the unfortunate conclusion, "once a sinus, always a sinus." Or, and this is the more distressing, an actual, real and active sinusitis develops as a result of operative intervention where formerly none existed or at most was but an end result or latent. What then is the answer? The answer is in diagnosis, not only as to the existence of a sinusitis but a determina-

tion of its nature, how far it may be infectious and as such act as a focus of infection or a cause of certain systemic or local symptoms. Furthermore, in what cases shall we operate and what kind of operation shall we do?

The earnestness and sincerity with which investigators and students have set to work to solve these problems is encouraging and augurs well for the future, but we must admit that as yet we are often in doubt. Baum⁷ deplores the "tendency to class every deviation from the normal under the one generic term of sinus disease." Lawson⁸ believes that non-suppurative sinusitis always precedes suppurative and that it often undergoes resolution even after infiltration and edema.

The whole problem of what constitutes virulence in microorganisms is unsolved. Dr. Corper of the Research Department of the National Jewish Hospital at Denver has devoted much time to the study of this question. Kistner's⁹ unusual experience of having cured systemic manifestations by repeated sinus operations in apparently non-purulent conditions is in accord with his belief that there are many degrees of infection, not always demonstrable as such and that can not even be determined by the organism. Therefore, while we believe that long standing sepsis is bound to cause systemic disturbances, the big question is what constitutes sepsis in a sinus and how from a practical standpoint shall we proceed? Shall it be as Proetz¹⁰ says by "the unscientific route of trial and error," or may we not adopt a well outlined plan to be followed in our daily routine and to be departed from only from time to time as we must in every professional question that confronts us?

The real message of this paper, if it carries any message, is a plea for conservatism, conservatism based upon a deliberate and unbiased review of literature but largely influenced by experience. "Impetuous youth finds that theory explains most of our bodily ailments, whilst staid old age regards it as a passing fad that will soon expire as many such have done before." May we not avoid the pitfalls of both and by our very conservatism advance our specialty a little perhaps

towards that "ideal knowledge" that means progress?

I am convinced that the most satisfactory results have followed adherence to the lessons learned from long experience. These lessons emphasize the value of clinical observations and relegate laboratory investigations to their proper place as aids. S. Weir Mitchell¹¹ has well said, "For unless men keep ahead of their instrumental aids, these to coin a word, will merely dematerialize them, and but measurably lift the mass without in proportion advantaging the masters of our art, who were so easily masters in days when the erudite touch was more uniquely advantageous than it is today."

Personally I subscribe to the statement of Shambaugh¹² when he says, "I am of the belief that focal infection is as unlikely to be occasioned by a surface infection involving the mucosa lining the accessory sinuses as it is from an infection of the mucosa lining the nasal passages; that is, it is possible, but highly improbable, that an infection of the mucosa in either place could cause systemic infection."

The well known investigation of Mullin¹³ which demonstrated the passage of finely divided coloring matter and later bacteria by means of the lymphatic system to peribronchial glands is still open to discussion. Why may the entire metastasis not be by inhalation rather than by lymphatics from the sinuses?

Childrey and Essex¹⁴, in a series of well conceived experiments, state definitely that their results "indicate that the mucosa of the sinuses is highly resistant to absorption," and "this applies both to the normal and the infected mucosa."

Examination

In the examination of a suspected case, the intra-nasal appearance is of great importance, especially the appearance of the middle turbinate and its vicinity. The mucous membrane here is highly sensitive to changes which alter the normal thin, pink structures to one more or less thickened, glistening with edema and bathed in altered secretion. The expression of Hurd's¹⁵ that, "the middle turbinate is the great barometer

of the ethmoidal sinuses" is a most happy figure, and I might add it is also, to a certain extent, the barometer of the maxillary sinus. The presence and location of secretion, unusual in amount or character, is highly suggestive especially if the cytological and bacteriological examinations reveal abnormal characteristics. This is not a routine in the average office practice, but it should be oftener considered. The location of the secretion which can be determined by shrinking the mucous membrane and, after thorough cleansing, placing the patient in various positions, has been of much help to me. The demonstration of secretion after suction, where before suction none could be seen, has also served me well at times. Repeated examination are often necessary at intervals of a day or more. One will frequently be rewarded by finding secretion in the middle meatus where none was seen before.

Transillumination is a great guide where applicable. It has not been given the credit that it deserves, largely because it has been carelessly observed and interpreted. There are degrees of density quite as distinguishable by transillumination as by x-ray, and seldom do the x-ray findings and those by transillumination differ where both are properly used. However, a pathological diagnosis by means of transillumination is no more accurate than that made by x-ray and like the x-ray examination should be considered only with other signs and symptoms.

The x-ray examination of the sinuses is one of the most valuable that we possess, but unfortunately there are so many fine points connected with its use that it has not yet taken its right place as a diagnostic aid for the masses. The purely technical side of roentgenology is in itself a difficult one, especially when applied to the nasal accessory sinuses. The roentgenologist should not be considered as a mere technician. As a well educated anatomist and pathologist and with the additional advantage of clinical training, he becomes a consultant of the highest importance. His value to us must be in proportion to the experience he has had in comparing films with the results

of operative and other treatment and with the findings therefrom. He will in time be able to make dependable diagnoses. I believe that there are times now, few perhaps, when he can accurately interpret the pathology by a study of his pictures. But the variations in films and in interpretations that we have all seen, and the lack of confirmation by operative findings that we have all encountered, make me feel that the clinician's judgment is the one to be depended upon—the clinician who uses every means at his command to make the diagnosis, including the x-ray.

Of all fallacies attending this subject, the one condemning the sinus as diseased, as infected, as indicating operation, because it shows some density in the radiogram especially when multiple sinuses are involved, is the worst and most dangerous. Rarely if ever should one undertake an operation solely on x-ray findings. I say this with the greatest of regard for the ability of my friends the radiographers, but from an experience which in many instances has been most unfortunate and which could be, if time permitted, specifically substantiated by the relation of many cases.

Finally, as a means of diagnosis, we should consider puncture and irrigation and exploratory operations. Before puncturing with the intent of irrigating, the nose should be thoroughly cleansed; a needle attached to a good syringe should be carefully thrust through the inferior meatus into the maxillary sinus and an attempt made to draw out whatever fluid may be in the sinus, or the sinus may be filled with sterile water and this withdrawn for examination. In the event that no fluid is withdrawn, the sinus should be irrigated with a sterile solution and the fluid received in a clean vessel, preferably one with a black lining. This enables one to distinguish the character of the washing which should be subjected immediately to bacteriological and cytological examination. It has been the experience of all of us that when a small quantity of secretion is retained in the sinus, irrigation does not always give positive results, and there are times when one can not make a decision even though the fluid is returned clear.

These instances, however, are extremely rare in my experience and I lay much stress upon the result of irrigation.

Exploratory operations are also justifiable at times, especially when other signs fail and the x-ray is unusually indicative of considerable sinus pathology. It often happens that the radiogram is very suggestive of the presence of tumors such as cysts or polyps; in such cases an exploratory operation by removing the anterior wall of the antrum enables us to examine with great care the interior of the cavity. The operation itself is simple and attended with no special discomfort and is by all means the very best way of determining the nature of the suspected lesion.

So far as being able to apply puncture and exploration to the other sinuses is concerned, I feel that in rare instances we may attempt these procedures in the frontal or sphenoid sinuses.

Sinusitis and Allergy

Perhaps the greatest difficulty in the diagnosis of sinus disease is found in those cases that present definite manifestations of allergy and at the same time suspicious symptoms of sinusitis. Harry Baum⁷ has recently read a paper entitled, "The Incidence of Allergy in Rhinologic Practice." This paper has as yet not been published, but through the author's courtesy I am permitted to quote, "that in the normal course of rhinologic practice approximately 27 1/3 per cent of all patients with nasal complaints may be expected to exhibit some form of allergy in the nose and of these about 89 per cent will show allergic changes in the sinus mucosa."

Unquestionably there are many instances in which an allergic sinus is associated with infection. Whether the infection has preceded the allergy, or vice versa, is a moot question. There is good authority for either view, but at any rate there can be no doubt as to the co-existence of both conditions in innumerable cases. It is true that in some of these cases symptoms of nasal and sinus disease, such as obstruction and discharge with definite x-ray and transillumination evidence, have suddenly cleared up following a simple change in environment. Proetz¹⁵

states that "allergic edema of antral mucosa can probably subside within a few hours." We have even seen improvement in the x-ray and transillumination pictures. On the other hand the dark antrum may persist in spite of the subsidence of all clinical symptoms, and we know that after operation the radiogram is still dense. This has led to belief in the so-called "latent or silent sinus," but to my mind this represents a condition similar to that found in the nose following an ordinary acute rhinitis which gets well to all intents and purposes but which may not have undergone complete resolution. These are the cases that often increase the susceptibility to colds and are the ones I believe that have a constitutional background which is responsible for the failure to return to a perfectly normal histology.

Allergy is not the only responsible underlying factor, but it is the one that is attracting the greatest attention at the present time. Even a hasty review of rhinologic literature shows that a sincere attempt is being made to understand this very common though elusive condition. The subject has been dealt with by a large number of dependable investigators, principally Americans. That toxemia arising from any cause such as alimentary, for example, may be the condition that underlies allergy is well argued by many. But although the local and general manifestations appear fairly definite, the difficulty in diagnosis arises in the determination of the special agent responsible for the allergy. Nothing tries our diagnostic ability as this does. All sorts of tests are indulged in, particularly cutaneous. The most thorough and careful history fails to give us the information we seek, and after all is done we may find that some unexpected hint upon the part of the patient or his relatives leads us at least to a partial solution of his problem. No two cases seem to be alike, and as our friend Mullin has said, "There is no short route to diagnosis." The most extreme measures in an attempt to find what particular food is the offending allergen are undertaken, and while I have not seen any one recommend starvation for a certain length of time, I am inclined to

think that the suggestion of Alvarez¹⁶ of the Division of Medicine at the Mayo Clinic, in speaking of the "Ways of discovering the Foods that Are Causing Indigestion," may eventually be applied to our problem. He says that the simplest method would be to ask the patient to fast for a week. "If," he says, "the distress continued, one would know that food was not the cause. If the distress ceased, then various foods could be tested one by one." This is the ideal food eliminating test; obviously it is not very practical.

When one finds a pale, boggy nasal mucosa covered with a thin watery secretion, when upon the slightest irritation the swelling increases or paroxysmal sneezing occurs, and when in addition to this the history has elicited attacks of urticaria or migraine or any of the other well-known manifestations of vaso-motor instability, one may fairly well conclude that he has an allergic condition to deal with. And furthermore if he can demonstrate the presence of a large per cent of eosinophiles, he may be still more confirmed in his diagnosis.

Allergy and Infection

Those cases in which there is a combination of eosinophiles and polymorphonuclears are the most difficult, for the suspicion of infection is immediately aroused. We know that the mucous membrane in infection is red and inflamed, and so where the combination exists we can not distinguish the predominating pathology. We are forced therefore to the conclusion that the two conditions are coexistent, and the question of treatment becomes more complicated. Shall we in these cases immediately proceed with surgical measures, remove polyps, or exenterate an ethmoid? It seems to me the best results have been obtained by following the conservative plan. Cases might be cited in considerable number to prove this contention.

We should proceed first with an attempt to remove whatever underlying condition, whatever allergy, whatever toxemia can be determined or suspected. It may become necessary completely to change the patient's environment by a change of climate, but every attempt should be made to establish

a better constitutional condition before undertaking operation. Time after time have I seen such marked improvement that we could say the persisting symptoms were due to infection. We can then proceed with our operation, making a large window in the naso-antral wall, not so much for the purpose of irrigating the antrum as for the purpose of drainage and ventilation. If in your judgment the length of time and the degree of disturbance warrant a radical operation, this may be undertaken, but at any rate surgery should follow constitutional treatment. This is one condition in which the rule of general treatment before surgery might not apply. After a process of exclusion, one sometimes feels that the allergy is dependent upon bacterial growth in the sinus. If one can conclude that this is the underlying factor, then proper drainage of that sinus will be followed by improvement in the allergic manifestations and the method of procedure should be reversed.

Constitutional Causes

We have seen how the question of sinusitis and that of allergy are intimately related, and if there is any one thing that stands out today in oto-rhino-laryngological literature it is the great importance that constitutional conditions play in the causation and consequently in the treatment of diseases of the ear, nose and throat. In the treatment of chronic middle ear suppuration, Mygind¹⁷ states that this is not only "a question of local surgery, but is also, and to an important extent, a question of general medical treatment," and so it is not surprising that wherever we look an attempt is being made to ascribe the cause of disease to certain changes as far back as the primary cells. Bio-chemistry is not a new thought in our hope for the cure of disease. In an attempt to find the cure for tuberculosis, bio-chemistry is attracting some of our best investigators. During the last ten years, Eugene Lewis¹⁸ has advanced some new and fundamental working theories. By systemic measures he attempts to "induce alterations of general body chemistry; to include *radical changes in diet and fluid intake; in many instances omission of starch, increases in proteins and fats, administration of chlor-*

ides, nitro-chlorides, iodides, arsenicals, mercurials; and in other cases "systemic treatment calculated to alter intercellular electrolyte content and cytoplasmic constitution."

I am afraid that few of us understand Lewis' theories well enough to subscribe to them. While his reports include some astonishing results, such as improvement following treatment and return of symptoms upon "reversing" treatments, we must credit him with sincerity of purpose and honesty. A mutual friend has written that he would accept his statements as "true, but they seem incredible," that "he is certainly enthusiastic about this thing and every letter I have from him tells me about some new experience. He protests that he is only groping along the edges and seems anxious for others to corroborate his results." In a recent letter Lewis¹⁰ writes, "There is no doubt in my mind that sometime soon, some one will find just what is needed; the right particle, added to today's supersaturated mixture of scientific and clinical data, will precipitate clear crystals of understanding in place of the amorphous cloud that represents the best I have been able to attain. The little I have glimpsed in trying to work out some of these problems convinces me that progress in their solution must take place along these general lines of thought and effort."

Perhaps time will show that he has succeeded in solving the very questions that we seem to know little about at this time. I am particularly in hopes that his work or something along the same lines may help our internists. They seem to be groping in the dark more than we are and often to the extent of making snap diagnoses of sinus disease, asking for operation to help them out of their dilemma. Shambaugh²⁰ has well said, "One can witness almost every day, especially in many of our small hospitals, a line of pediatricians, general surgeons, and general practitioners coming with a string of patients for nose and throat operations." He further states that the inability to recognize the indications for such work "has been responsible for the flood of indiscriminate surgery in the nose and throat, that has begun to attract the attention of the whole medical profession, and to bring a deserved

opprobrium on the specialty of otolaryngology."

Chronic Suppuration of the Middle Ear

The treatment of chronic suppuration of the middle ear by radical operation is thoroughly discussed by Mygind²¹, Asherson²¹ and others. One is profoundly impressed with the failure in many cases and the strong disposition for careful discrimination in the class of cases operated; moreover, the treatment does not end with the operation. Zinc ionization and the use of iodine-bearing powder have taken a well earned place in our therapeutic armamentarium.

Petrositis

The Gradenigo syndrome has taken its proper place in cases of otitis media and mastoiditis, and the recognition of petrositis, the new term for petrous suppuration, has explained the cause of delayed healing. Through Kopetsky²² and Eagleton²³, we have found a valuable operative way out.

The Labyrinth

An important field in otology has been opened through the work of Barany and others abroad and Jones and Fisher in this country in the study of the labyrinth, not only as a diagnostic measure in intra-cranial lesions but also in acute suppurative processes complicating otitis media and mastoiditis. One cannot say, however, that the subject is as yet a finished product, for instead of the radical operations on the labyrinth so enthusiastically advocated by the Vienna school, we find greater conservatism as our means of diagnosis, and our evaluation of prognostic signs becomes more definite.

Progressive Deafness

The question of progressive deafness, than which there is no more important medical or sociological problem, is attracting a great deal of attention. Time will not permit an analysis of the progress that has been made through the study of otosclerosis by the Committee on Otosclerosis appointed for that purpose by the American Otological Society. When the work of this Committee is finally completed, may we not hope that some valuable remedy will be given us? In the meantime I should like to impress one important point in the management of these

cases—this has to do with the psychology of the hard of hearing. Our every effort should be made to bring about a mental attitude of greater happiness and of less despair. By showing these unfortunates that they by no means need be social outcasts, that by speech reading they can take a most important place in business and in society generally, great good will result. The manner in which the otologist presents this matter to his patient is most important. In his attempt to be strictly honest in his dealings, and in his prognosis he is often so abrupt and so severe that the patient suffers the greatest distress and his unhappiness becomes at times that of a melancholic.

Did time permit I should like to discuss the status of other pertinent subjects and to point out the very considerable progress that is apparent in our present attitude. By virtue of long experience and after much swinging of the pendulum, the best thought favors conservatism also in conditions other than diseases of the accessory sinuses.

The Future

This paper would not be complete did we not give a thought to the future progress of our specialty. That much remains to be done and that the outlook is not discouraging is emphasized by several writers. Mackenty, whose death occurred recently (Dec., 1931) and whose loss to our specialty is keenly felt, said only a short time before his death, in a very comprehensive though somewhat too optimistic survey of the big problem of focal infection, that "a brilliant and disease-conquering future awaits the young men in our profession." Shambaugh, whom I have quoted as pointing out some of our errors, says in closing an address on "Otolaryngology and the General Practitioner," "I do not wish to leave the impression that work in this field is in any sense decadent. I believe the outlook for the future advancement of this specialty was never brighter."

In a splendid address on the occasion of his taking over the chair of Ear, Nose and Throat Diseases at the University of Graz, Professor Gustav Hofer²⁴ gives a most comprehensive picture of "The Present and Future of Laryngo-Rhino-Otology."

Some Problems

Among the many questions that remain to be solved he asks why some mucous membranes respond to infection by forming polypi while in other cases only suppuration results? Why in one turbinate does hypertrophy occur and in others none? Why are there so many reactions of mucous membrane to irritation and general underlying conditions; in the larynx why is it that one acquires a simple catarrhal laryngitis and another a pachydermia? Why does one vocal band show edema and another develop a fibroma?

Besides these old time problems, new fields are forcing themselves upon us. *Intracranial surgery* falls quite naturally into the field of otology and rhinology by reason of the close anatomical and pathological relation between the ear and nose and the cranial contents. *Bronchoscopy* is intimately concerned with the diagnosis and treatment of diseases of the lungs, *esophagoscopy* with diseases of the esophagus and stomach, especially ulcers and cardio-spasm; malignancies and infections of the pharynx and its contents involve the neck to the extent of demanding extensive external surgery.

The coming ear, nose and throat specialist, the younger men of our profession should so train themselves that they will be competent to take over all these *natural adjuncts* to our limited field and thus not only enlarge their sphere of usefulness scientifically but also overcome their economic distress brought about by the encroachment on our specialty by men in all other departments of medicine and surgery. We older men are quite willing to leave to our younger confreres and the coming generations this inevitable progress, for as Hofer says, "Exact knowledge marches slowly though steadily forward."

Nevertheless, when we contemplate the past and present of our specialty we have had much to thrill us and much to be thankful for and so we say with Osler²⁵, "I am sorry for you, young men of this generation. You will do great things. You will have great victories, and standing on our shoulders, you will see far, but you can never have our sensations. To have lived through

a revolution, to have seen a new birth of science, a new dispensation of health, re-organized medical schools, remodeled hospitals, a new outlook for humanity, is not given to every generation."

REFERENCES

- ¹Duverney, Joseph G.: Baas's History of Medicine, J. H. Vail & Co., 1889, page 515.
- ²Cleland, Archibald: Baas's History of Medicine, J. H. Vail & Co., 1889, page 917.
- ³Saissy, J. H.: Baas's History of Medicine, J. H. Vail & Co., 1889, page 904.
- ⁴Bozzini: History of Laryngology and Rhinology, Wright, 1914, page 204.
- ⁵Semon, Sir Felix: Autobiography of Sir Felix Semon, Jarrolds, London, page 84.
- ⁶Mackenty, John Edmund: Upper Respiratory Focal Infections in Some of Their Regional and General Manifestations, Bulletin of the N. Y. Academy of Medicine, Feb., 1931, page 88.
- ⁷Baum, Harry L.: The Incidence of Allergy in Rhinologic Practice, not yet published.
- ⁸Lawson, Lawrence J.: The Role of Nasal Accessory Sinus Membrane in Systemic Infections and Toxemias, Annals of Otol. Rhinol. and Laryngol. March, 1930, page 160.
- ⁹Kistner, Frank B.: Chronic Non-Purulent Sinusitis and Its Clinical Significance, Trans. Am. Laryngol., Rhinol. and Otol. Soc., 1929, page 7.
- ¹⁰Proetz, Arthur W.: Sinus Surgery, Trans. Am. Laryngol. Rhinol. and Otol. Soc., 1929, page 130.
- ¹¹Mitchell, S. Weir: The Early History of Instrumental Precision in Medicine, Presidential Address before the Congress of Physicians and Surgeons, Sept. 23, 1891. Tuttle, Morehouse and Taylor, 1892, page 9.
- ¹²Shambaugh, George E.: Chronic Maxillary Sinusitis, Surgical Clinics of North America, Feb., 1932, page 148.
- ¹³Mullin, William V.: The Relation of Paranasal Sinus Infection to Disease of the Lower Respiratory Tract, Jour. A. M. A., Sept. 4, 1926, page 739.
- ¹⁴Hurd, Lee M.: Some Aspects of Nasal Accessory Sinusitis, Penn. Medical Jour., Nov., 1931, pages 57-62.
- ¹⁵Proetz, Arthur W.: Allergic Reactions Localized in the Antrum, Annals Otol. Rhinol. and Laryngol., March, 1930, page 90.
- ¹⁶Alvarez, Walter C.: Ways of Discovering the Foods That Are Causing Indigestion, the Proceedings of the Staff Meetings of the Mayo Clinic, July 27, 1932, page 443.
- ¹⁷Mygind, S. H.: The Indications for Radical Operations in Chronic Middle Ear Suppuration, Jour. Laryngol. and Otology, May, 1932, page 297.
- ¹⁸Lewis, Eugene R.: Five Nasal Tumors, Annals of Otol. Rhinol. and Laryngol., June, 1932, page 605.
- ¹⁹Lewis, Eugene R.: Personal communication.
- ²⁰Shambaugh, George E.: An Address on Otolaryngology and the General Practitioner, The Canadian Medical Assoc. Jour., Vol. 17, 1927, page 1145.
- ²¹Asherson, N.: Some Post Operative Results of the Radical Mastoid Operation in Children. Post-Operative Otorrhea, Jour. Laryngol. and Otology, May, 1932, page 317.
- ²²Kopetsky, Samuel J., and Almour, Ralph: The Suppuration of the Petrous Pyramid, Annals Publishing Co.
- ²³Eagleton, Wells: Unlocking of the Petrous Pyramid for Localizing Bulbar (Pontile) Menin-

gitis Secondary to Suppuration of the Petrous Apex, Archives of Otolaryngol. March, 1931, pp. 386-422.

²⁴Hofer, Gustav: Ueber die Gegenwart und Zukunft der Laryngo-Rhino-Otologie., Wiener Klinische Wochenschrift, Dec., 1931, page 1617.

²⁵Osler, Sir William: The Great Physician, Edith Gittings Reid, 1931, page 241.

²⁶Archives of Otolaryngology, Nov., 1931, p. 564.

ABSTRACT OF DISCUSSION

Frank R. Spencer, M. D., Boulder: Proetz has emphasized the importance of diluting lipiodol one-half with some other oil such as olive oil. This makes the lipiodol about the viscosity of sinus secretions and makes it much easier to introduce. If the natural ostium is swollen shut, oil will not enter the sinus; if the ostium is partly closed, there will be delayed or partial filling of the sinus.

Displacement irrigation of the sinuses for diagnosis and treatment has been a great help. One thing which has been disappointing is finding a maxillary sinus which shows marked thickening of the mucous membrane one day and perhaps the next day no thickening at all. In other words, there is an allergic swelling of the mucous membrane simulating an infection. Proetz' method is a great help in recognizing this.

Polypi, osteomata, etc., will show better in the ray films by this method, but the differential diagnosis is not always easy, even with the aid of the iodized oil. In such cases the radiologist is a great help, just as he is with many other conditions. Sinuses may show delayed filling and also show delayed emptying unless there is a marked lessening of the swelling of the mucous membrane from contact with the iodized oil while it remains in the sinuses. Personally, I would rather inject the oil into the maxillary sinus, through a cannula, than to depend upon the filling of this sinus through the natural ostium. With the ethmoidal cells and the frontal sinuses, it is necessary to fill them through the natural ostia. Sometimes this is true of the sphenoidal sinuses. If I can find the natural opening without too much difficulty, I would rather fill the phenoidal sinuses through a cannula.

I want to emphasize three features of pharyngo-maxillary abscess: First, the importance of ligating the internal jugular vein in cases of abscess, especially if the patient has high fever, chills and sweats, indicative of thrombosis of the internal jugular vein. I am not advocating ligation of the internal jugular vein in all cases. Second, I want to emphasize the importance of a free incision for drainage. A short incision is of very little use. I believe Mosher's incision is best, because it gives the best exposure of the field of operation and is most likely to secure the best drainage. Third, a few salient anatomical facts must be remembered. The pharyngo-maxillary fossa is triangular in shape. It is bounded above by the base of the skull and ends below at the apex at the hyoid bone; it contains the great blood vessels and nerves of the neck; it is internal to the ascending ramus of the inferior maxilla and parotid gland and is in front and external to the spinal column and external to the superior constrictor of the pharynx.

Dr. Levy has emphasized the importance of careful study of sinus diseases before resorting to surgery. Much of the present day fear of surgery, by the laity, could have been avoided had this precaution been in more general use. It is not uncommon to see patients who have made

their own diagnosis of sinus disease when I cannot find evidence of the disease.

Allergy, during the past few years, has been given too important a place as the cause of sinus disease. It is important, but the pendulum has swung too far. Time, experience, and mature judgment will accord allergy its proper place.

Harry L. Whitaker, M. D., Denver: Operative surgery on the nasal sinuses is an extremely serious matter, especially in young life. Opaque media, in conjunction with the x-ray, has made the diagnosis of sinus disease increasingly accurate, and has also made possible visualization of changes from the normal, to both physician and layman. X-ray and lipiodol have been of inestimable value to me in my study of pathology in the nasal sinuses. I present two cases confirming the work done with opaque media by Dr. Earnest.

Case 1: A young woman, aged 30, without any history of sinus disease. Left sided retrobulbar neuritis of four days' duration. Gradually diminished vision and intense occipital pain. It was a question of where the infection went through. Two points of entrance usually are the posterior ethmoid cells or the adjacent sphenoid sinus.

Chronicity, produced by unnecessary surgery in a sinus not involved, could be avoided here only if a differential diagnosis could be accurately made. Lipiodol was introduced by the Proetz method, and the oil was found to enter the sphenoid sinus freely but did not fill the highest posterior ethmoid cells. The diseased ethmoid cells were exenterated, sphenoid not opened and vision in left eye restored in six days; no complications. Before the advent of opaque media, this differential diagnosis could have been made only with the greatest difficulty, and with some loss of time.

Case 2: A young woman, aged 24, suspected of having pulmonary tuberculosis, badly depleted, anemic, exhausted and excessively under weight. Head examination, after lungs found not involved, revealed a purulent right maxillary, possibly also ethmoid sinusitis, of some nine months' duration.

How little surgery could be done to relieve this very sick patient? There were three plans of procedure: treatment, permanent opening through nose into maxillary sinus, and radical maxillary sinus surgery. Lipiodol was injected into the right maxillary sinus and on x-ray was found to be held $\frac{1}{2}$ inch above the floor of the sinus by diseased membrane. Here again opaque media made possible a quick and accurate diagnosis. Treatment and permanent opening were ruled out, and radical surgery was done with full assurance that it was the proper procedure.

Each case had a thickened nasal septum, blocking the ventilation and drainage of the middle meatus of the nose. Both should have had a septum operation as soon as possible after the seventeenth year. Only by this means are we to effectively prevent, and at times stop, these distressing diseased nasal sinus cases.

Thomas E. Carmody, M. D., Denver: Dr. Pattee's words about the radical work, as we might call it, that Dr. Earnest has spoken of and the conservative side that Dr. Levy has spoken of, I think calls for middle ground. I don't think we need to be too radical; we don't need to be too conservative.

Speaking of the "cure" of asthma, Dr. Earnest modifies that and says we probably shouldn't call it "cure," but we relieve it, and the cases of asthma that are not relieved that are caused by nasal pathology, I think are not relieved because our operations are not thorough enough.

I think the pollens, foods, and infections all are intermingled with the action of the endocrine glands. I don't think we want to consider any one of them alone. Dr. Spencer speaks of the medical treatment with the silver salts. A great many of us have used apiol and glycerine, although it is not recognized by the Council on Pharmacy and Chemistry.

C. E. Cooper, M. D., Denver: I think when we know more about physiology of the sinuses we will know more about how to treat them. I believe that is one of the things that is lacking. Speaking directly of Dr. Palmer's paper, pharyngo-maxillary abscesses commonly can be opened inside the mouth. It does not always succeed, of course. Those cases in which it does not succeed, or in which we have repeated hemorrhages or sepsis, indicate an external operation.

C. H. Darrow, M. D., Denver: Relative to Dr. Earnest's paper, allow me to say that I have found that attempts to keep iodized oil in the antrum is sometimes difficult, and from a practical viewpoint for those who attempt to use it, I would suggest that a little cotton placed beneath the middle turbinate, whether you insert your oil through the normal ostium or by a needle beneath the inferior turbinate, will facilitate matters materially in shifting your patient from where you inject to the radiologist.

In those cases that have had a window resection, naturally it is difficult to retain the oil in the antrum. Here, if you will simply soak a thin, narrow gauze with your iodized oil and pack it into the antrum rather snugly and fairly soppy, you get a good picture where otherwise the oil will be lost.

Relative to Dr. Palmer's paper, we must bear in mind that the space that we call the pharyngo-maxillary space is not really a space at all; it is a collapsed area excepting when filled with pus, or if you want to study the space, do so in the infant where it is found filled with fat. The tonsil certainly is probably the most potent cause of infection of this space. There may be an infection of the tonsil or a peritonsillar abscess. The latter may have been apparently successfully treated by opening and yet the patient does not get well and there is nothing in the throat or even externally in the neck to indicate the presence of pus. Yet that patient will go along through an infection in the pharyngo-maxillary fossa to a thrombosis of the internal jugular vein, a septicemia and death. We think we have eradicated the infection in the throat by opening the abscess, and yet our deep-seated infection goes on its way. Another way that deep-seated pus gets into the pharyngo-maxillary fossa, I think, is through the retropharyngeal glands. Small children with retropharyngeal abscesses may have them opened and still have deep-seated pus resulting in the neck. Another factor with which I have had no experience, but which is frequently recorded in the literature, is infection from vertebrae, usually tuberculous. Recently, however, I have had an infection of the pharyngo-maxillary fossa from an abscess of the parotid gland. Instead of rupturing into the external auditory meatus, which is so common, it chose to rupture through the inner wall of the capsule of the gland. The upper third of the capsule of the parotid gland is deficient and makes it easy for infections to rupture through into the pharyngo-maxillary fossa.

The patient suddenly lost his pain and the swelling in the parotid region and it immediately appeared in the pharynx and in the tissues of the neck. This man nearly lost his life through the

marked edema in the pharynx and in the larynx, so that we must remember that infections of the parotid gland can cause a deep-seated infection of the neck.

Mosher has contended that the carotid sheath is the Lincoln Highway of the neck and in all deep-seated infections of the neck, if we can get access to the carotid sheath, it simplifies our surgical procedures.

Kenneth D. A. Allen, M. D., Denver: One reason why the roentgenologists cannot render more evidence on sinus disease by x-ray examination is because they can not follow the cases through. This is difficult because so much of the work is done in the nose and throat man's office. If he will help us follow these cases, we will be of more assistance. Another method by which the roentgenologist can give more evidence is by lipiodol injection. Three years ago when Dr. Proetz spent two weeks in Denver, everyone became interested. Since then the interest has rather died out, but lipiodol in the sinuses is almost as valuable an aid in procuring evidence by the x-ray as barium is in the gastro-intestinal tract.

There is a pitfall to which Dr. Spencer alluded very briefly. Poppy seed and other constituents of opaque media cause allergic response. This allergic response in the sinuses does two things: It presents a picture that looks like pathological membrane. It also prevents emptying of the sinus by occluding the ostia. A long time in emptying and a rarefied line between the opaque media and the bone are evidence of disease. Except for this pitfall, lipiodol in the sinuses will greatly facilitate the evidence which x-ray can present.

Dr. Levy (Closing): That portion of my paper which I had time to read was largely a flight of sentiment and does not admit of real discussion. It was my desire particularly to impress among other things this: that one has not infrequently a condition in which allergy and infection are co-incident, and these are the cases which offer one of our most difficult problems. I am not opposed to operation however radical. My plea for conservatism was largely to determine first, whether the condition was purely allergic or purely an infection or the combination of these two, and having determine the underlying factor or factors, operation should be undertaken with great care. The question whether to operate first and then treat the allergy or whether to treat the allergy and then operate is the problem. That the root of this matter may be found in bio-chemistry, in cellular change, is quite within our present way of thinking.

Health Education

Those interested in the subject of health education can learn much from advertising promoters who look at the public as a dynamic being possessed of momentum, continuous though varying, from birth to death.

Advertisers show interest in the individual as such and not merely in his disease, which amounts to a technic in motivating the individual. "A variety of so-called anti-septics have been sold to the public to the

extent of millions of dollars, simply because the advertisers know that no man would willingly offend the nostrils of his neighbor."

Health educators must be familiar with man's fundamental needs and desires. Man is curious. Let us stimulate his curiosity and feed it with salutary knowledge. Man has the instincts of combat and appeal, of submission and assertion, of inquisitiveness, constructiveness, laughter. There is the parental instinct, and a great need for food, for sex, and there is the driving force of self-preservation.

But man is not natively perverse, any more than he is a natively noble. He merely is. Within him are resident a given set of potentials that are subject to manipulation by those skilled in the art, for good or for bad.

It is this realization I hold basic to any appreciation of the psychophysics of health education. It is in this appreciation and in the knowledge of man's dynamic nature, of the trends of his individual growth, of the motives behind his behavior, that we shall find the secret for motivating human action along desirable ends.

Aviation Hazards

If you want to know the truth concerning the danger or lack of danger in flying, read the summary of the fourth report of the Committee on Aviation of the Actuarial Society of America, summarized in "Insurance Field," October 14, 1932. There has been a marked decrease in air casualties in scheduled flying during 1931. The passenger death rate in scheduled flying is given as two deaths per 100,000 passenger hours, or 5 per 100,000 flights. The deaths from accidents in non-transport planes are much higher. In 1930, there was a passenger death for every 4,300,000 passenger miles flown, as against one death for every 440,000,000 railroad passenger miles. In 1931, there was a passenger fatality for every 4,600,000 passenger miles flown.

Take this Journal home to your wife.

CASE REPORTS

HEMATOCOLPOS AND HEMATOSALPINX IN A YOUNG GIRL

S. J. LEVINE, M.D.
GROVER

M. C., female, aged 13, was brought to Grover Hospital complaining of severe pain in abdomen with inability to urinate for the past twenty-four hours. The patient was showing great shock and much distress. She was immediately catheterized, and 2000 c.c. of urine was obtained. The bladder was irrigated with warm boric acid solution. She was somewhat relieved. Upon further examination as to the cause of anuria, an imperforate hymen was found, tense and bulging. Under local anesthesia a medial incision was made and 500 c.c. of dark blood obtained. A hot saline douche was given. The patient was able to return home next morning. She was able to urinate and was not menstruating.

Eight months later she was brought back, complaining of pain in lower abdomen and inability to move her bowels. Her mother stated that her menses were regular until a few months ago when it became profuse, irregular, and painful.

Examination: a girl, aged 13, fairly well nourished. She walked with difficulty and talked slowly and imperfectly (sequelae of anterior poliomyelitis at age of 2). Skin was dry and mucous membranes normal; teeth good; tonsils imbedded with no exudate on pressure; no thyroid enlargement; heart and lungs normal. Pulse 80; temperature 100 F. Abdominal muscles were rigid and tender. She was in such distress that the rest of the examination was made under anesthesia. Bi-manual examination was impossible, the vaginal tract being obliterated; rectal examination revealed a large mass, soft in character; the uterus could not be outlined. The mass was the size of a grapefruit.

A catheterized specimen of urine indicated no pathology. The patient was put to bed; blood showed hemoglobin 70 (Dare); leucocytes 12,000; reds 4,000,000; differential count within normal limits.

Laparotomy was decided upon and revealed the uterus high in the abdomen, and posterior to it a large mass was found. After numerous adhesions were cut, it was found to be the left tube and ovary. The mass was removed with difficulty. The right tube and ovary were normal; appendix was removed. The patient made an uneventful recovery. Menses were normal thereafter. The Fallopian tube measured 15 centimeters in length and was coiled upon itself. It was filled with blood which was dark and had a foul odor. The ovary was 10 centimeters in diameter, dotted with numerous cysts filled with serous yellow fluid, jelly-like in character. A diagnosis was made of hematosalpinx and cystic ovary.

Hematosalpinx may occur on one or both sides following vaginal obstruction or atresia. This case was undoubtedly one of acquired atresia, since there was no record of retained secretions at or soon after birth. Such a condition may result from chafing and erosion from urine or thin fecal matter, trauma, masturbation, or even the chafing from muscular movements. Retained secretions stretch the thin membrane which results at the introitus. There may be no subjective symptoms until such a mass accumulates as to cause painful pressure, as in this case. Hematometra and hematosalpinx form a part of the picture in extreme cases. The latter may give very acute symptoms, not infrequently simulating ruptured tubal pregnancy, following several months, as we notice, after relief of the vaginal distension.

In 1929 one-half of the physicians in the United States received a net income less than \$3,800. Over 21,000—15 per cent—received less than \$1,500. More than 4 per cent lost money.

AT YOUR SERVICE—The new offices of the Colorado State Medical Society, 537 Republic Building, Denver; Telephone, KEystone 0870.

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PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Tuberculosis and the Depression

Have tuberculosis associations throughout the United States been broadcasting incorrect information? Has the money that has gone into health education year after year been wasted? The answer is emphatically "No." The need for spreading the doctrine of "Watch Your Health" is greater now than it ever was, for in addition to the threat contained in lowered living conditions is the danger of worry, which often is ignored but which is of great importance medically. It would be remembered that tuberculosis is not an over-night disease that comes on one suddenly. It usually steals into the body, taking its own time to establish a strong foothold before giving notice of its presence. It is impossible to guess how many people are now contracting the disease which in many cases will not make its presence known for years to come. Again, many persons are on the ragged edge of health and a slight push, such as lack of food, or even worry, is likely to tip the balance against them. There are also the persons who, without knowing it, have the disease, and in their case the end of the battle may be hastened by excessive deprivation.

Many children now heavily infected are at present presumably suffering enough privation to cause the balance to turn unfavorably, and as a result they will later become victims of the disease. Thus, the havoc wrought by the present depression is not likely to show as a sudden hump in the mortality curve but will be spread over a period of years, and this will make the situation seem less important than it actually is. Children in a tuberculous household are very likely to become infected. It is for this reason that when a doctor discovers tuberculosis in one of his patients he urges that every member of the family shall be examined to discover which member is giving it to the others.

The importance of keeping these facts vividly before the public is greater at the present time than at any single period of the past. And in addition to this educational work, which is conducted in practically every town of the United States by the 2,084 affiliated state and local tuberculosis associations, clinics must be maintained, preventoria conducted, nursing service continued, and various other phases of anti-tuberculosis work supported.—From *Journal of Home Economics*, Dec., 1932.

Future of Wandering Children

A study of jobless boys wandering about the country in search of work, made by the Children's Bureau early in 1932, is summarized in the Annual Report. The number of boys adrift is indicated by such samples as the following: 1,529 boys under 21 years of age given temporary relief in Phoenix, Arizona in three and one-half months; 6,000 youths fed at the soup kitchen in Yuma during the winter; about 150 boys under 21 entering California weekly by the "hitch-hike" method, at each of three different points where counts were made. As many as thirty-five young men and boys seriously ill, some with pneumonia, were removed from box cars in one western city last winter. One railroad reported that more than fifty youths killed and more than 100 crippled in jumping moving freight cars.

Observers agree that the majority of these transient boys are not habitual hoboos, but are on the road because "there is nothing else to do" and that most of them would normally be in school or at work. The Children's Bureau Report urges the need for a concerted plan for dealing with them, instead of leaving city after city to provide a night's shelter, an indifferent meal or two, and then order them to "move on."

The report also serves warning that unless state legislatures raise the school-leaving age, there is every prospect that when the depression ends, and employment opportunities increase, children will again be drawn into industry in large numbers.—From the *American Child*, Jan., 1933.

LIBRARY NOTES

"A Library Is a Summons to Scholarship"

EDITOR: J. J. WARING, M.D.

The Surgical Clinics of North America. Published Bi-Monthly (Six Numbers a Year), Volume 11, No. 3. New York Number, June, 1931. Philadelphia and London: W. B. Saunders Company.

In review of this number of the clinics contributed by the New York Surgeons, it contains many interesting articles. Discussion and report of a case of diaphragmatic hernia of the liver by Dr. Howard Lillenthal is of interest in view of the difficulty in diagnoses and the limitation of surgical treatment. Also of great interest is the report of the New York Fracture Committee and a symposium on fractures given by a New York and Brooklyn Fracture group of the American College of Surgeons. More recent methods of dealing with difficult fracture problems are given in a very concise manner.

The Surgical Clinics of North America. Published Bi-Monthly (Six Numbers a Year), Volume 11, No. 5. Pacific Coast Surgical Association Number. October, 1931. Philadelphia and London: W. B. Saunders Company.

In the October number of the Surgical Clinics contributed by the Pacific Coast Surgeons is a very interesting discussion of an unusual condition of idiopathic gangrene of the scrotum. It is beautifully described in an article by Drs. Harold Brunn and Franklin I. Harris. Two interesting cases of Situs Transversus and the difficulty encountered in making surgical diagnoses in these cases is reported by Dr. Fred R. Fairchild. Still another very interesting report from the Clinic by Dr. A. J. Scholl deals with the problem of Hydronephrosis with the report of cases and discussion of surgery indicated. As usual this volume contains a quantity of very interesting matter in very concise form.

The Surgical Clinics of North America. (Issued Serially, one number every month). Volume 12, No. 5. Chicago Number, October, 1932. Octavo of 268 pages with 61 illustrations. Per clinic year, February, 1932, to December, 1932. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The October issue of the Surgical Clinics of North America again carries a very high character of concise articles well worth careful attention. The outstanding feature is a symposium on gall bladder disease seen from its medical aspect by Dr. Donald P. Abbott of Presbyterian Hospital, Chicago. A comprehensive evaluation of gall bladder x-rays is given by Dr. Cassie B. Rose, and the surgical management of gall bladder disease is wonderfully presented in the usual style of its author, Dr. Arthur Dean Bevan. This concise review of so common an ailment is well worth any practitioner's time and effort. A paper by Herman L. Kretschmer dealing with the treatment of benign and malignant prostatic hypertrophy by electroresection is of considerable interest in presenting this newer method of treatment. Several articles from the clinic of Dr. Carl A. Hedblom dealing with the various phases of pulmonary sepsis are thoroughly worth reading.

G. E. CHELEY.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1931. Volume XXIII. Edited by Mrs. Maud H. Mellish-Wilson and Richard M. Hewitt, B.A., M.A., M.D. Octavo volume of 1231 pages with 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$13.00 net.

Year books in medicine continue to have a peculiar charm. To know the extent of our advance in science and art during the immediate preceding year is the natural desire of the well-informed. While these collected papers do not exhaust the record of such progress, they are of a general enough nature to gauge its degree and direction.

The volume contains 577 papers, 91 of which are printed in full, 36 are abridged, 43 are abstracted, and 399 by title only. Presenting certain papers by title seems to be justified either because they are of a technical and limited interest or cover subjects the printing of which would involve some objectionable repetition. Besides a useful purpose is achieved by keeping the papers in one volume which even in this method of treatment has required 1231 pages.

Convenience as a book of reference is served by the usual segregation into related groups: viz., Alimentary Tract; Genito-Urinary Organs; Ductless Glands; Blood and Circulatory Organs; Skin and Syphilis; Head, Trunk, and Extremities; Brain, Spinal Cord, and Nerves; Technic; and Miscellaneous Papers. The editor and publisher have extended this convenience by appending a summary to some papers, a practice which is not universally followed in these publications.

The papers are well edited. Much of the subject matter is not new. Emphasis of standardized methods and practices in medicine has its value comparable to that of introduction of the new. From either or both points of view this volume is a valuable addition to any doctor's library.

C. F. KEMPER.

Clinical Roentgen Pathology of Thoracic Lesions.

By William H. Meyer, M.D., Professor of Roentgenology in the New York Post-Graduate Medical School of Columbia University. Director of Roentgenology in the New York Post-Graduate Hospital. Illustrated with 183 engravings. Philadelphia: Lea and Febiger. 261 pages. Price \$6.00.

As stated in the preface to his book, the author has attempted to record in a concise and condensed form the subject as presented in the basic course for students and associates of the Department of Roentgenology of the New York Post-Graduate Medical School. In that portion, Dr. Meyer explains the contents of each of the book's subsequent six sections.

In the introduction, he discusses the fundamentals of roentgen interpretation. Under this heading, he considers the variations within normal limits, structural density, roentgen pathology, postural variations, motion, and ray divergence.

Section I is titled "The Roentgenological Study of the Thorax," and in it he gives a concise scheme of study, technic, anatomy, and the location of possible lesions as portrayed on the x-ray film.

In the following sections, Dr. Meyer continues his course of study. The title of each section is descriptive of its material: Section II, Roentgen Pathology; Section III, Diseases Affecting the Thoracic Cage; Section IV, Special Diseases of the Respiratory System; Section V, Lesions of the Heart and Pericardium; and Section VI, the Esophagus and Subphrenic Organs in Relation to Intrathoracic Pathology.

The book is profusely illustrated with many clear and well chosen roentgenograms and pen

and pencil sketches. Dr. Meyer is to be complimented on the simple, concise, and accurate method he presents. This book should be of value to those who are interested in chest pathology.

JOHN S. BOUSLOG.

The Control of Tuberculosis in the United States.

By Philip P. Jacobs, Ph.D., Director of Publications and Extensions, National Tuberculosis Association, Managing Editor, *Journal of the Outdoor Life*. New York: National Tuberculosis Association, Publisher. 407 pages. 1932.

The author traces in clear and concise language the evolution of a great health movement, pays tribute to its pioneers, such as Biggs, Trudeau, Bowditch, Flick, and others, and outlines graphically the technique employed by the National Tuberculosis Association and its subsidiary organizations to control one of man's ancient and formidable foes, tuberculosis. In discussing the significant achievements of this campaign, cognizance is taken of the role social, economic, and biologic factors have played in furthering the notable reduction in the mortality from this disease, but it is pointed out that the organized movement, by promoting widespread health education, staging health demonstrations in various communities, and arousing a sense of public duty to increase hospital and sanatorium facilities for treating the sick, has greatly accelerated the rapid decline in the death rate.

A most commendable part of the program has been child health education. It aims to stimulate among school teachers and administrators an interest in school health problems which are not only of academic but of vital economic interest. It is but a matter of time, and not in the too distant future, when the tuberculin skin test will be routinely employed in all children of school age and a radiographic chest examination made of all reactors, for, as Meyer aptly crystallizes the problem, the child is the "master-key" in the program of prevention. The care of the substandard and pretuberculous child in preventoria, summer camps, and special schools such as Lymanhurst in Minneapolis, assumes special significance and importance.

The role of the public health nurse in the crusade against tuberculosis is properly emphasized, but it was refreshing to note the well-deserved criticism that many of these crusaders do not have a modern conception of tuberculosis. The reviewer should like to add that a large number of nurses have no practical knowledge at all of this disease and shun it more than the layman does leprosy. The blame for this situation must be attributed to the training schools, the majority of which give to their pupils inadequate training in tuberculosis, or none at all. Since the public health nurse is an important factor in the anti-tuberculosis campaign, it is important that special courses be inaugurated for these nurses who plan to engage in this type of work.

The book is divided into four parts and thirty-one chapters. An adequate bibliography appears conveniently after each chapter. While some of the reading matter is purely technical either from the administrative or the medical viewpoint, the book as a whole should prove of inestimable value to public health workers and physicians interested in tuberculosis.

I. D. ERONFIN.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 16, No. 2. (Chicago Number—September,

1932). Octavo of 272 pages with 47 illustrations. Per Clinic year July 1932 to May, 1933. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

This number of the clinics contains the usual interesting discussions arranged and distributed to be of interest to most branches of internal medicine. A special feature is a symposium on heart disease in which many phases of cardiac conditions are discussed. There are included in this several presentations dealing with hypertension, nephrosclerosis, and nephritis, also an interesting and practical discussion on pericarditis. The neurologic cases on the auriculotemporal syndrome and other vasomotor disturbances about the head, should be of great value to the internist.

There are practical clinics on alkalosis, calcoli-sis universalis, amebic dysentery, and pancreatic disease, also one on treatment of syphilis of the skin, and two dealing with the treatment of infants.

Two very timely discussions, one on the rationale of specific therapy in lobar pneumonia and the other on acute anterior poliomyelitis, crystallizes our knowledge of the management of these important diseases. Two clinics on the treatment of peptic ulcer with mucin report progress with this comparatively new form of treatment. This is a very practical and interesting volume.

LORENZ W. FRANK.

Clinical Endocrinology of the Female: By Charles Mazer, M.D., F.A.C.S., Assistant Professor of Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania; Gynecology to Mt. Sinai and Northern Liberties Hospitals, Philadelphia; and Leopold Goldstein, M.D., Demonstrator of Obstetrics, Jefferson Medical College; Assistant Gynecologist to Mt. Sinai Hospital; Formerly Fellow in Gynecologist Research, University of Pennsylvania. 518 pages with 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Price \$6.00.

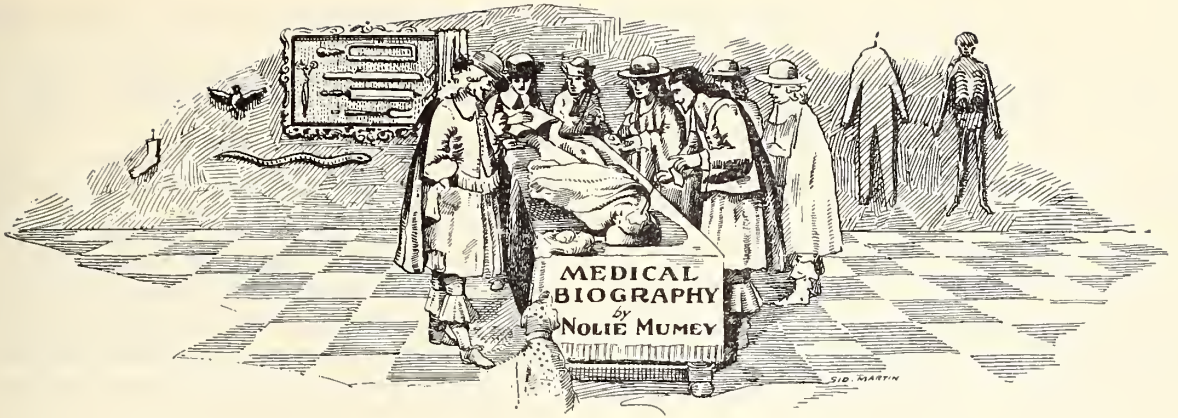
This is one of the best books written so far on the subject. In the first six chapters, the endocrine glands are discussed individually insofar as their known function is concerned. The sixth chapter discusses the known interrelationship of various gland groups and mentions other possible physiological combinations.

The next eight chapters deal with the commoner gynecological complaints, including functional sterility. The etiologies of the foregoing are discussed in detail together with the tests that may be employed to make more accurate diagnosis. The treatment is given in more detail than other works upon the subject. The last few chapters take up the various tests for pregnancy together with short dissertations on lactation, the menopause, and endocrine obesity.

The Frank test, Fluhman test, and various pregnancy tests are given with such detailed instructions as to make the book a laboratory manual as well as a text. The methods of preparing some of the endocrine products in the small laboratory are also outlined in full.

The book is well written and as easy to read as could be expected considering the complexity of the subject matter. The striking thing throughout the whole work is the detailed specific instructions for tests and treatment which is extremely welcome after the former vast literature of generalities.

JOHN R. EVANS.



SILAS WEIR MITCHELL

(Continued from February Issue)

S. Weir Mitchell was an untiring worker, living most of his life in a medical atmosphere. He published twenty-two scientific papers twelve years after graduation. The first ten years of his practice was very unprofitable financially, but in later life his income reached as high as \$100,000 annually.

Dr. Mitchell was one of the founders of the Pathological Society of Philadelphia, the first meeting of which was held in 1857. He was also trustee of the University of Pennsylvania for thirty-five years. As president of the College of Physicians, he served from 1886 to 1889 and again from 1892 to 1895. His very keen observation, a point which he stressed as being important in the art of medicine, his loyalty to his friends, to the institution with which he was associated, and to the medical profession helped make him the most accomplished and versatile physician of his time.

The fact that a genius is not always appreciated by his parents is well illustrated by a remark of his father, who once said to him, "You are wanting in nearly all the qualities that go to make a success in medicine. You have brains enough, but no industry." Dr. Mitchell later commented on this statement by saying: "He was correct, I developed late." He further states, "Surgery, which was my father's desire for me, was horrible to me. I fainted so often at operations that I began to despair. But by

assisting at the surgical clinics I overcame, by degrees, my horror of pain and blood."

Dr. Mitchell was physician to the Philadelphia Orthopedic Hospital and Infirmary for more than thirty years, where he had an opportunity to study nerve injuries in relation to various orthopedic cases, making many miraculous cures. The institution soon grew to be one of the largest hospitals of its kind in the country.

His associate and assistant, J. Madison Taylor, said of him, "Weir Mitchell stands eminent in history among those who moulded character and purpose in nations at opportune times. He was a towering personality, the embodiment of, and on a parity with, such subtle energies as those of steam, radium, of the Roentgen, the Haversian, and now the cosmic rays of Millikan. When such human influences become appreciated they will be utilized for world-wide advantage."

Practical application of medical knowledge combined with a penetrating personality made Dr. Mitchell a great healer; his persistency and untiring efforts in searching for the truth made him a great discoverer. It has been said that he always wanted to teach physiology, but was defeated for the chair at Jefferson Medical College by J. Aiken Meigs. After this disappointment Mitchell said, "I then resolved I would devote myself to human welfare as a practitioner of medicine, in particular to maladies of the nerves, the mind and behavior or feeling reactions, to their remakings and reconstruction.

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

Annual Dues Are Becoming Delinquent

IT IS easy to postpone the matter of paying annual dues to the Medical Society. In these days of stress it is frequently hard to find the necessary dollars to pay them.

It is nevertheless true that every member needs the Society more now, when outside forces are increasing their attacks on medicine, than he needs the Society in prosperous times.

Equally, the Society needs its members, and its members' dues, more now than before. Income from other sources has been markedly reduced. Society expenses have been reduced proportionately all along the line, salaries, rent, office expenses, and other items being trimmed as much as the Board of Trustees feels is consistent with efficient operation. But certain expenses are higher now than at other times, particularly those connected with the work of the Public Policy Committee. Also the demands for the services of the Society's Executive Office are more numerous than ever before.

The great leaders of medical thought over the country agree that while necessary adjustments must be made to meet economic conditions, medical organization must be held on a high plane if it is to survive. Dr. Olin West, Secretary and General Manager of the American Medical Association, in a recent letter to the Executive Secretary of the Colorado Society, expressed this feeling of national leaders in the following paragraph, which is quoted with Doctor West's permission:

"I fully appreciate the fact that physicians of the country generally have been hard hit by the unfavorable economic situation. I do hope, however, that it will be possible for the constituent state associations and component county societies to maintain themselves on the highest possible plane of efficiency because I am convinced that there never has been a time when a need for efficient organization has been as great as it now is. I fear that a great deal of short-term thinking is being indulged in, by which I mean that under the stress of the present situation many men are ready to grab at any straw that the wind may blow within reach. I fear they are not projecting their thinking far enough into the future. It will be almost surely disastrous if permanent policies are adopted on the basis of conditions that now exist and that it is reasonable to expect will

be relieved, to some extent at least, if and when a reasonable degree of prosperity has been re-established. In my opinion it is important that now as never before our problems should be thoroughly considered with a view to the possible future effects of any action that may be taken."

All of this comment boiled down, is just this: The Society needs your dues and needs your active, vigorous support. You need the Society, and the ten dollars a year paid for state membership is a small price for the service and protection it buys. The service and the protection are there, available to every member who uses them.

Dues become delinquent March 5 and members unpaid by April 1 must be suspended, under the By-Laws. See to it that your county secretary reports your own dues paid, today.



The Immediate Problem In Medical Legislation

LAST month a statement written by the Executive Secretary appeared in this section of the journal, expressing the hope that by now a fairly accurate picture of the legislative situation could be drawn, portraying in some detail just what laws might be enacted affecting public health and the practice of medicine. We regret that such is, as yet, impossible.

However, the month that has elapsed since that was written has shown the Public Policy Committee its greatest problem. It is plainly laid before us. The problem now, as ever, is the problem of unity.

If the organized medical profession is to have any weight at all before this or any other legislature, we must be able to present our program in unity. The Public Policy Committee has experienced increasingly acute difficulties because many doctors, in groups and by individuals, are working at cross purposes with each other and with the Committee.

The By-Laws of the State Medical Society are very explicit in the powers delegated to the Public Policy Committee. They state that "subject to advices of the House of Delegates, it shall be the duty of the committee to determine and put into effect the policy of the Society in all things pertaining to the relations of the Society or the profession of the State with the lay public. The Committee shall advise and assist in matters of medical legislation, medical licensure, public

health, and instruction of the public in matters of hygiene and prevention of disease, through the press or otherwise, and in defense of medical research."

Many times during the last month representatives of the Public Policy Committee have discussed important matters with state senators and representatives, only to find that other doctors, members of our Society, have taken an opposite view in talks with these same legislators. The legislators then ask, very naturally, "Who really represents the doctors? You are a doctor and you tell us one thing; So-and-so is a doctor and he tells us just the opposite. Who is right? Whom shall we believe?"

The Public Policy Committee makes no claim of infallibility. It may have been in error in any one of the positions it has taken. But the Committee believes it should be the first body advised if members disagree with its actions, since it is the regularly constituted group charged with the duty of determining and carrying out the Society's policies.

The Committee has an open mind on all subjects, even open to reversal after a policy has been determined. It has no wish to be autocratic or dictatorial. It does believe that the profession will get exactly nowhere in the legislature unless we present a united front. This applies not alone to matters upon which the Committee has already acted and set a policy. It applies equally to the several legislative problems on which the Committee is not yet fully informed. In some such instances two or more groups of physicians have already expressed sharply divided opinions to the General Assembly, before the matters in controversy have even been presented to the Public Policy Committee. The Committee has therefore the added problem of finding a common ground on which these widely divergent opinions can be united.

In conclusion, any statement on behalf of the Public Policy Committee would be grossly incomplete if it failed to pay tribute to the three Doctors of Medicine who, as members of the legislature, are untiring in their efforts to enact and protect good medical legislation. The Committee offers, in the name of the Colorado State Medical Society, its vote of thanks to these doctors, Senator E. J. Brady of Colorado Springs, and Representatives W. H. Twining of Aspen and R. W. Calkins of Cortez.

W. W. King, M.D.,
Chairman, Committee on Public Policy.



Send in your dues! You need to be in good standing in your Society—especially in case of a malpractice suit. And your Society needs you.

Basic Science—Heart of Our Legislative Program

A LITTLE farther along in the pages of this issue we have reproduced for the Public Policy Committee the Basic Science Law, together with the complete set of arguments in its favor. This material, reprinted from this issue, was presented to every member of the Colorado legislature, to many interested laymen, and was mailed to officers and committeemen of the State Medical Society and to the officers of every county medical society.

No law is perfect, whether it is a medical law or some other. The same applies to the Basic Science Law. Were the Basic Science Law written solely from the viewpoint of the medical profession it would differ greatly. This one, which the Public Policy Committee proposes for Colorado, is drawn with the hope that it will be effective and that at the same time it will avoid the prejudices of cultists, and will satisfy the legislators and the public generally.

It is the heart of the Society's legislative program as mapped out by the Public Policy Committee. The Committee hopes that every member will use his influence in its behalf.



SCHOOL OF MEDICINE ANNUAL CLINICS

The Eighth Annual Clinics of the University of Colorado School of Medicine and Hospitals will be given on:

March 22, 23 and 24, 1933

The general outline of the program will be as follows:

Wednesday, March 22

Forenoon—Obstetrics and Gynecology, Orthopedics, Dermatology.

Afternoon—Neurology, Tuberculosis.

Thursday, March 23

Forenoon—Medicine, Urology, Proctology.

Afternoon—Ophthalmology, Pathology, Psychiatry.

Friday, March 24

Forenoon—General Surgery, Pediatrics.

Afternoon—Oto-Laryngology, Radiology.

Forenoon Clinics will begin at 8:45 and close at 12:30.

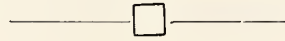
Afternoon Clinics will begin at 2:00 and close at 5:00.

A cordial invitation to attend these clinics is extended to all physicians of Colorado and adjoining states. There is no registration or tuition charge.



The indiscriminate dispensation of samples without removing the label encourages self-medication. Such practice is too evident for discussion. Remove the label.

WHY COLORADO SHOULD HAVE A BASIC SCIENCE LAW



A license to practice healing is taken by the public as the State's stamp of approval on the practitioner's qualifications. The State should guarantee that fundamental education underlies that license.

The Basic Science Law would make impossible domination of any one school of healing by any other. Each school would be wholly independent and could regulate its own professional requirements.

The Basic Sciences: Anatomy, Physiology, Pathology, Chemistry, and Bacteriology, do not include *methods* of diagnosis or treatment. A practitioner of *any* method of healing, to deny the need of these sciences would thereby admit that his practice is not based on an understanding of the human body.

The Basic Science Law is aimed at no one school of healing, but would elevate the standards of all. Its exemptions prevent infringement on the rights of religion or the rights of healers already licensed.

The Basic Science Law would permit each school of healing to have its own examining board and at the same time guarantee a uniform minimum standard of education for all healers.

The Basic Science Board would be made up of educators, and would include no practitioner of any kind of healing. High school graduates could take the examination.

The Basic Science Law has been passed by six states and the District of Columbia. It has raised standards of all branches of the healing art where it is in force. It has proven its worth.

The Basic Science Law is fair and impartial. It is progressive legislation, designed to meet modern needs. Colorado should pass it.

THE COLORADO STATE MEDICAL SOCIETY.

(For more details concerning the Basic Science Law, please see the following pages.)

THE PRINCIPLES OF THE BASIC SCIENCE LAW



(A statement on behalf of the Colorado State Medical Society)

The fundamental principle underlying the existence of examining and licensing boards, be they for doctors, lawyers, architects, barbers, plumbers, or other professional groups or skilled trades, is that the state establishes minimum standards of education and skill, and by its license guarantees to the public that the licensee is qualified to perform his chosen service. A state license displayed in the office of a practitioner of healing is the state's promise to its citizens that the healer is qualified to assume responsibility over the life and health of any patient.

A thorough knowledge of the thing he works with or on is presupposed in all lines of skilled endeavor. A license to treat disease presupposes that the healer has a thorough knowledge of the human body and an ability to know the well body from the sick body. Public welfare and public health demand high standards for those who perform the important task of making and keeping the community well.

Colorado laws regulating the various branches of the healing art have not kept abreast of changing conditions and therefore are falling short of their purposes. Each school of thought in healing admits this to be a fact. Each school of healing which has sponsored existing laws, and each General Assembly which passed them, did so with the best motives. The laws have been intended to protect the public against incompetence of those who accept payment for the prevention, relief or cure of illness and injury. However, all agree that this has not been fully accomplished.

In the United States as a whole, the same situation exists. Many states experience greater ineffectiveness of laws controlling the healing art than does Colorado. The good accomplished by strict laws governing practitioners of medicine and surgery has been offset in many states by the legalization and entrenchment of many new schools of healing which diagnose and treat disease by one or another preconceived creed. These schools are frequently referred to as "medical cults," to distinguish them from "nonsectarian medicine," which latter frowns upon the practice of healing by creed or by preconceived or limited methods.

Of the so-called "medical cults," a few have grown until they have obtained legal recognition. Many have died out in a few months or a few years. Interesting examples are seen in states where examining boards still exist on paper though all colleges of the particular school of healing have disbanded and there are no such

prospective healers to examine. Newly-formed schools of healing customarily have lower admission requirements than those, for instance, of medical and osteopathic schools. Likewise, their courses are usually much shorter and their graduation requirements lower. Where such schools are legally recognized and their graduates licensed, the public is therefore not materially better off than when medical practice acts were first enacted.

While in a better position than many of her sister states, Colorado must face the same problem, and should protect her citizens by establishing a uniform minimum standard of education for all healers, rather than to embark upon the creation of a multiplicity of different examining boards with an equal multiplicity of minimum standards.

Colorado now licenses the doctor of medicine and the doctor of osteopathy, requiring of each the same education and the same examination, giving each the same privileges, which include the practice of medicine and surgery in the broadest sense of these words. Colorado also recognizes and licenses, without examination, the chiropractor, giving him the right to practice only within narrow limitations. Other states give limited licenses to additional schools of healing: naturopathy, napropathy, mechanotherapy, sanipractic, psychotherapy, psycultopathy, spondylotherapy, magnetic healers, and still others—the number and variety of such theories of healing being limited in some states only by the imagination of those who wish to create them. There is every reason to believe that certain of these schools of healing will soon petition the Colorado General Assembly for separate boards with examining and disciplinary powers.

Either the basic qualifications demanded by law of practitioners of medicine are unnecessarily rigid, or the licensing of all practitioners of all schools should be based on a comparable minimum of knowledge of the human body.

Under existing and proposed Colorado laws, the State gives its citizens no guarantee that limited practitioners have ever studied such basic sciences as anatomy, physiology, pathology, etc., yet the State licenses them to assume full responsibility for the life and health of every patient who applies for treatment.

Some persons, both laymen and those professionally trained, have advocated the abolition of all forms of so-called "cult practice." However, to forbid practice by any established school of healing would be to deprive a large number of

men and women of their means of livelihood, and would destroy the value of their colleges. It would be an impossible task, complicated by constitutional questions, to exclude from the practice of healing those systems already recognized. Likewise it would be illogical to recognize a firmly entrenched school of healing and at the same time to forbid the establishment of further new systems. Such would place a legal limit on human progress.

Others have proposed that recognized schools of healing of all kinds be absorbed into a homogeneous body of nonsectarian practitioners; that the slate be wiped clean and that we begin all over again in the hope of keeping dogma out of the practice of healing hereafter. Such a process of absorption would raise the standards of many sincere and intelligent practitioners who are now in limited fields. But due to the differences in educational qualifications, such would certainly tend to lower the standards of the resulting general community of practitioners. Moreover, there is no reason to believe that if every "cultist" were by law converted into a nominally "nonsectarian" practitioner, new "cults" would not still spring up.

Since it is impossible to abolish the difference of opinion between the many schools of healing, and inexpedient to absorb all into a nonsectarian body of practitioners, a middle ground must be sought. This middle ground seems to have been found in the "Basic Science Law," such as has been in force for the last eight years in the State of Wisconsin, for six years in the States of Connecticut, Minnesota, Nebraska and Washington, and for the last four years in the State of Arkansas and the District of Columbia.

The Basic Science Law grants that schools of healing differ greatly in their methods of diagnosis and treatment, but holds that all healers must be well grounded in the knowledge underlying the ability to recognize diseases and distinguish them one from another. It is of the greatest importance to both the individual and the community that the practitioner have the necessary basic knowledge to recognize a given disease as dangerous or not dangerous, to know whether the sufferer has simply a common cold or the beginnings of pneumonia, whether a skin eruption means merely "the hives" or a contagious disease, whether the abdominal pain comes from a green apple or appendicitis. The State should guarantee to the public that its licensed practitioners have this knowledge.

Under the Basic Science Law, all schools of healing are required to have this certain minimum fundamental knowledge, and to that extent they are equal and stand on the same footing. The Basic Science idea holds that creed and dogma have no place in the fundamental sciences on which the healing art is based. All states having basic science laws in force agree that these sci-

ences must include anatomy, physiology and pathology; all but one likewise include chemistry; others include bacteriology, hygiene and diagnosis. The proposed Colorado law which is now presented for your consideration would include as the Basic Sciences: Anatomy, Physiology, Pathology, Chemistry, and Bacteriology, for it is clear that no one can understand disease without at least that much fundamental knowledge.

The Basic Science Law makes impossible the domination of any one school of healing by any one or more other schools.

The Basic Science Law grants suitable exemptions to religion, to those already licensed in the State or specifically permitted by law to practice without license, to dentists, nurses, midwives, optometrists, chiropodists, etc., so long as all these remain within the proper limits of their respective fields.

An important feature of this measure is that the prejudices of drugless healers against examination by medical boards are entirely eliminated. Likewise the distrust of medical practitioners in the ability of drugless healers to conduct adequate examinations in the fundamental sciences is avoided. This is accomplished through provision that the Board of Examiners in the Basic Sciences shall be made up of educators, shall have on its membership no person engaged in the practice of any branch of the healing art, and no more than one member out of the five who is an advocate of any one school of thought in healing.

The Basic Science Law ignores differences in preprofessional education by allowing high school graduates to be examined.

Persons who pass the examination held by the Basic Science Board are given certificates to that effect. Such certificates do not entitle them to practice, but merely authorize their admittance, on compliance with other necessary requirements, to examination by whatever one of the several professional examining boards each applicant may choose. Without such a certificate no applicant can be examined professionally.

Each professional board may impose such further requirements as the laws of the State may authorize. Subject to their respective laws, the medical board may make its own requirements, the osteopathic board its own, the chiropractic board its own, the naturopathic board its own, etc.—for as many different schools of healing as the General Assembly chooses to legalize. Every board would be at liberty to accept as adequate the examination given by the Basic Science Board in the fundamental sciences, or to reexamine the applicant in those same sciences, as each board might choose. Each school of healing would be wholly independent of every other; the State requiring only that all practitioners must come up to the minimum standard of knowledge in the Basic Sciences.

The reasonableness and fairness of this plan to all concerned is obvious. It recognizes that a certain knowledge of Anatomy, Physiology, Pathology, Chemistry, and Bacteriology lies at the very foundation of all diagnosis and treatment of human ailments, but ignores all differences of opinion among practitioners as to methods of diagnosis and treatment.

Standards of practice of all branches of the healing art have been raised in each of the states where this law has been passed. In no state where this law has been passed would governmental authorities consider its repeal. It is not perfection, but it is eminently satisfactory where it is in force. Unquestionably it is progressive legislation.

The attached bill is presented for your earnest consideration. It combines, so far as is possible, the best features of the similar laws in force in other states, yet avoids complicated machinery, avoids increased general expense to the state, and avoids the features of certain states' laws which render them distasteful to one or another school of healing.

This bill is presented by the Colorado State Medical Society solely in the interest of public health and public protection, both present and future. No doctor of medicine has anything to gain or lose from the passage of the Basic Science Law. The general public has much to gain if the Legislature can enact a law to bar uneducated persons from taking human life into their hands.

The undersigned officers and committeemen of the Colorado State Medical Society will be at the service of any legislator who may request additional information on this subject.

DR. FRANK B. STEPHENSON, Denver, President.
 DR. LORENZ W. FRANK, Denver, Secretary.
 MR. HARVEY T. SETHMAN, Denver, Executive Secretary.
 DR. WALTER W. KING, Denver, Chairman, Public Policy Committee.
 DR. H. R. McKEEN, Denver.
 DR. EDWARD DELEHANTY, Denver.
 DR. GERRIT HEUSINKVELD, Denver.
 DR. A. L. BEAGHLER, Denver.
 DR. W. W. HARMER, Greeley.
 DR. O. D. GROSHART, La Junta.
 DR. L. L. WARD, Pueblo.
 DR. A. C. HOLLAND, Colorado Springs.

A BILL

FOR

AN ACT RELATING TO THE BASIC SCIENCES UNDERLYING THE PRACTICE OF THE HEALING ARTS.

Be It Enacted by the General Assembly of the State of Colorado:

SECTION 1. A board is hereby established, to be known by the name and style of the State Board of Examiners in the Basic Sciences, hereinafter referred to as the board.

SECTION 2. After sixty days from the taking effect of this act, no person shall be permitted to take an examination for a license to practice

the healing art or any branch thereof, or be granted any such license, unless he has presented to the board or officer empowered to issue such a license as the applicant seeks, a certificate of ability in anatomy, physiology, chemistry, bacteriology, and pathology (hereinafter referred to as the basic sciences), issued by the State Board of Examiners in the Basic Sciences.

SECTION 3. For the purposes of this act, the healing art includes any system, treatment, operation, diagnosis, prescription, or practice for the prevention, ascertainment, cure, relief, palliation, adjustment, or correction of any human disease, ailment, deformity, injury, or unhealthy or abnormal physical or mental condition, with the intention of receiving compensation or making a charge therefor.

SECTION 4. The Governor, within thirty days after this act takes effect, shall appoint the State Board of Examiners in the Basic Sciences, consisting of five members. The members of said board shall be appointed one for one year, one for two years, one for three years, one for four years, and one for five years, from the dates of their respective appointments. On the expiration of the term of any member, the Governor shall fill the vacancy by appointment for a term of five years. On the death, resignation, or removal of any member, the Governor shall fill the vacancy by appointment for the unexpired portion of the term. Every member shall serve until his successor is appointed and qualified. The members of the board shall be selected because of their knowledge of the basic sciences aforesaid, and each member shall be a professor, or an assistant or associate professor, or an instructor on the faculty of the University of Colorado, the Colorado State Agricultural College, the Colorado School of Mines, or some other institution of learning in the State of Colorado of equal rank. Each member shall have resided in Colorado not less than one year next preceding his appointment. No member of the board shall be engaged in the practice of the healing art or of any branch thereof, during his term of membership on the board, and no two members of the board shall be exponents or adherents of any one school or system of therapy.

SECTION 5. The board shall meet and organize within fifteen days after its appointment. It shall have the power to elect officers, to adopt a seal, and to make such rules and regulations for its procedure and for the conduct of its business as it deems expedient to carry this act into effect and as are not inconsistent with this act. A majority of the members of the board shall constitute a quorum. The board shall keep a record of its proceedings, which shall be prima facie evidence of all matters contained therein. Each member of the board shall receive not to exceed ten dollars (\$10.00) per diem and actual expenses

for the days he is actively engaged in the discharge of his duties, provided that he may not receive compensation for more than four meetings of the board or for more than twenty days total sitting in any calendar year. The compensation of the members and other expenses of the board shall be paid out of the fees received from applicants, provided that this shall not be construed to prohibit the making of appropriations to cover deficits properly incurred by the board. The treasurer of the board shall give such bond, running in favor of the State, as the State Treasurer may determine. The office of the board shall be in the City and County of Denver.

SECTION 6. The fee for examination by the board shall be fifteen dollars (\$15.00). The fee for reexamination within any twelve month period as hereinafter provided shall be ten dollars (\$10.00), but the fee for reexamination after the expiration of twelve months shall be the same as the original fee. The fee for the issue of a certificate of authority by reciprocity, on the basis of qualifications as determined by the proper agency of some other state, territory, or the District of Columbia, shall be twenty-five dollars (\$25.00). All fees shall be paid to the board by the applicant at the time of filing application. The board shall pay all money received as fees into the state treasury, to be placed by the State Treasurer in a special fund to the credit of the board. The State Treasurer shall pay out of such fund all expenses properly incurred by the board, only upon warrants drawn by the State Auditor thereon, on vouchers issued and signed by the president and by the secretary or treasurer of the board.

SECTION 7. The board shall conduct examinations at such times and places as it deems best. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability, and skill in the basic sciences. The examinations shall be conducted in writing, but may be supplemented by oral examinations, examinations in the laboratory, dissecting room, and dispensary, in the discretion of the board. If the applicant receives a credit of 75 per cent or more in each of the basic sciences, he shall be considered as having passed the examination. If the applicant receives less than 75 per cent in one subject and receives 75 per cent or more in each of the remaining subjects, he shall be allowed a reexamination at the examination next ensuing, on application and upon the payment of the prescribed fee, and he shall be required to be reexamined only in the subject in which he received a rating less than 75 per cent. If the applicant receives less than 75 per cent in more than one subject, he shall not be reexamined within twelve months next following his original examination, nor unless he presents proof satisfactory to the board of additional study in the basic sciences

sufficient to justify reexamination, and if reexamined he shall be so reexamined in all subjects.

SECTION 8. No certificates shall be issued by the State Board of Examiners in The Basic Sciences unless the person applying for a certificate submits evidence, satisfactory to the board, (1) that he is not less than twenty-one years old; (2) that he is a person of good moral character; (3) that he was graduated by a high school accredited by the University of Colorado or a school of similar grade, or that he possesses educational qualifications equivalent to those required for graduation by such an accredited high school; and (4) that he has a comprehensive knowledge of the basic sciences as shown by his passing the examination given by the board, as by this act required. This shall not be construed to prevent the issue of certificates under the provisions of Section 9 of this act.

SECTION 9. The board may in its discretion waive the examination required by Section 8 of this act, when proof satisfactory to the board is submitted, showing (1) that the applicant has passed in another State, territory, or the District of Columbia an examination in the basic sciences either before a board of examiners in the basic sciences or before a board authorized to issue licenses to practice the healing art; and (2) that the requirements of that board are not less than those required by this act as a condition precedent to the issue of a certificate.

SECTION 10. Any action of the board shall be subject to review by writ of certiorari issued out of the District Court of the City and County of Denver.

SECTION 11. Any basic science certificate or any license to practice the healing art or any branch thereof, issued contrary to this act, is void. Any licensing board which has issued a license on the basis of a void basic science certificate shall revoke or cancel that license. The procedure for such revocation or cancellation shall be in accordance with the provisions of the act under which said license was issued, authorizing the cancellation or revocation of licenses generally. The certificate issued to any person by the State Board of Examiners in the Basic Sciences shall be revoked automatically by the revocation of his license to practice the healing art or any branch thereof. Any certificate issued by the State Board of Examiners in the Basic Sciences may be revoked by said board after a hearing on notice, on the ground that the same was obtained by fraud or misrepresentation; and in case of such revocation any license to practice the healing art or any branch thereof, granted by virtue of the licensee holding such certificate, shall be automatically revoked.

SECTION 12. Any person who practices the healing art or any branch thereof without having obtained a valid certificate from the State Board

of Examiners in the Basic Sciences, except as authorized by this act, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not more than three hundred dollars (\$300.00) or imprisoned in the county jail not more than ninety days, or both so fined and so imprisoned, in the discretion of the court. Each day that this section of this act is violated shall be considered a separate offense and shall be punishable in like manner with each preceding offense.

SECTION 13. Any person who obtains or attempts to obtain a basic science certificate by any dishonest or fraudulent means, or who forges, counterfeits or fraudulently alters such certificate, shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than five hundred dollars (\$500.00) or imprisoned not more than six months, or both so fined and so imprisoned, in the discretion of the court.

SECTION 14. Any person who obtains or attempts to obtain a license to practice the healing art or any branch thereof from any officer or board authorized to issue any such license, without presenting to said licensing authority a valid certificate issued to the applicant by the State Board of Examiners in the Basic Sciences, as in this act required, shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than three hundred dollars (\$300.00) or imprisoned in the county jail not more than ninety days, or both so fined and so imprisoned, in the discretion of the court.

SECTION 15. Any person who knowingly issues or participates or aids in the issue of a license to practice the healing art or any branch thereof to any person who has not presented to the licensing board or officer a valid certificate from the State Board of Examiners in the Basic Sciences, or any person who has presented to such licensing board or officer any such certificate obtained by dishonesty or fraud, or any forged or counterfeit certificate, shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than three hundred dollars (\$300.00) or imprisoned in the county jail not more than ninety days, or both so fined and so imprisoned, in the discretion of the court.

SECTION 16. The State Board of Examiners in the Basic Sciences and the several boards or officers authorized to issue licenses to practice the healing art or branches thereof shall investigate every supposed violation of this act coming within the scope of the authority of such boards or officers, respectively, and report to the proper District Attorney all cases that in the judgment of the board or officer warrant prosecution. Every police officer, sheriff, and peace officer shall investigate every supposed violation of this act that comes to his notice, or of which he has received complaint, and apprehend and arrest

all violators. It shall be the duty of the Attorney General to represent the State Board of Examiners in the Basic Sciences in all actions brought by or against the board. It shall be the duty of the several District Attorneys to prosecute violations of this act.

SECTION 17. This act shall not be construed as applying to dentists, pharmacists, nurses, midwives, optometrists or chiropodists, practicing within the limits of their respective callings; nor to persons who are licensed to practice the healing art or any branch thereof in Colorado on or before sixty days after the day when this act takes effect; nor to officers of the United States Army, Navy, or Public Health Service; nor to persons who are specifically permitted by law to practice without licenses, who practice each within the limits of the privileges thus granted to him; nor to Christian Science practitioners or persons practicing religious tenets or religious rites or ceremonies as a form of religious worship.

SECTION 18. Nothing in this act shall be construed as repealing any statutory provision in force at the time of the passage of this act establishing requirements governing the issue of licenses to practice the healing art or any branch thereof, or as in any way lessening such requirements. But any board authorized to issue licenses to practice the healing art or any branch thereof may, in its discretion, either accept certificates issued by the Colorado State Board of Examiners in the Basic Sciences in lieu of examining the certificants in such sciences, or it may further examine such certificants in such sciences.

SECTION 19. Should the courts of this State declare any section, part or provision of this act unconstitutional or in conflict with any other section or provision of this act, then such decision shall affect only the section, part or provision so declared to be unconstitutional or in conflict and shall not affect any other section, part or provision of this act. The General Assembly hereby declares that it would have passed this act and each part, section, subsection, sentence, clause or phrase irrespective of the fact that any one or more other parts, sections, subsections, sentences, clauses, or phrases be declared unconstitutional.

SECTION 20. This act may be cited as "Basic Science Act, 1933".

SECTION 21. All acts and parts of acts contrary to the provisions of this act or inconsistent therewith are hereby repealed.

SECTION 22. The General Assembly hereby finds, determines and declares that this act is necessary for the immediate preservation of the public peace, health and safety.

SECTION 23. In the opinion of the General Assembly an emergency exists; therefore this act shall take effect and be in force from and after its passage.

MEDICAL SOCIETIES

This department of Colorado Medicine is set aside for reports of recent meetings, announcements of future meetings and accounts of other important activities of the county and district societies, composing the Colorado State Medical Society. Every meeting of every local society should be reported. If your society is not represented, see that your secretary reports the next one, or that some other member is appointed to the task. Other societies want to know what your society is doing.

* * *

THE COLORADO SOCIETY OF CLINICAL PATHOLOGISTS

The regular meeting of the Colorado Society of Clinical Pathologists was held January 21, 1933, at the Brown Palace Hotel. Fourteen members attended.

The scientific meeting consisted of a paper by Dr. A. J. Chisholm entitled "The Relation of Pulmonary Tuberculosis to Anorectal Fistula: Clinical, Pathological, and Bacteriological Studies.

The Society will hold its next meeting the third Saturday in April.

PAUL D. GARVIN, Secretary.

* * *

BOULDER COUNTY

The Boulder County Medical Society held its annual meeting at the Boulderado Hotel, Thursday, February 9, 1933. Officers for the ensuing year were elected, after which a report from the Medical Economics Committee was read by Drs. O. M. Gilbert, John Andrew, and F. R. Spencer.

MARGARET L. JOHNSON,
Secretary.

* * *

DENVER COUNTY

The regular meeting of the Denver County Medical Society was held in the auditorium of the Capitol Life Insurance Company Building, Tuesday, February 7. Drs. John V. Ambler and Benjamin Edgar McBrayer were elected members of the Society. After the business meeting a scientific program was presented by members of the Presbyterian Hospital staff. Dr. C. B. Ingraham presented a paper on "Lipiodol Injections to Determine Patency of the Fallopian Tubes." Dr. E. L. Harvey spoke on "Caesarian Section," Dr. J. Rudolph Jaeger on "Treatment of Brain Injury in the Newborn," Dr. Herman Maul on "Physiology of Blood Transfusion" and Dr. E. B. Swerdfeger on "Oesophageal Ulcer." X-ray pictures and lantern slides were used to illustrate some of the papers. The following doctors took part in the discussion: Frank B. Stephenson, E. L. Harvey, C. B. Ingraham, L. E. Daniels, J. R. Jaeger, P. C. Carson, J. R. Evans, George B. Packard and C. E. Cooper.

Forty-five members attended the meeting.

O. S. PHILPOTT,
Secretary.

* * *

FREMONT COUNTY

At the regular meeting of the Fremont County Medical Society held at Florence, January 23, Dr. R. E. Holmes delivered a paper on the "Wright Method in the Treatment of Leg Ulcers." After the scientific meeting, the following officers were elected for 1933: Dr. Kon Wyatt, President; Dr. R. C. Adkinson, Vice-President; Archie Bee, Secretary and Treasurer.

A. BEE, Secretary.

LARIMER COUNTY

Dr. C. F. Kemper of Denver was the guest speaker at the meeting of the Larimer County Medical Society held February 1, and gave an interesting talk on "Nephritis." The scientific meeting was preceded by a dinner at the College Cafeteria.

The Woman's Auxiliary of the Larimer County Medical Society held a meeting the same evening at the hospital.

DUANE F. HARTSHORN,
Secretary.

* * *

MESA COUNTY

Dr. H. H. Ziegler spoke on "Chronic Hemolytic Jaundice" at the January 17 meeting of the Mesa County Medical Society held at the La Court Hotel. The following officers were elected for the ensuing year: President, Dr. A. G. Taylor; Vice-President, Dr. E. H. Munro; Secretary-Treasurer, Dr. Harvey Tupper.

V. T. DEWAR, Reporter.

* * *

NORTHEAST COLORADO

The Northeast Colorado Medical Society held its regular meeting Thursday, February 9. Drs. T. L. Howard and J. M. Lipscomb of Denver, Dr. Harris of Chappell, Nebraska, and Dr. Goldberg of Sedgwick were guests of the Society. Dinner was served at the Marshall Cafeteria. The business meeting and clinical showing of patients was held at the St. Benedict's Hospital. Dr. Howard presented a paper on "Resection of the Prostate," which was followed by a demonstration of the resection instruments and a cystoscopic examination of a patient with prostatic enlargement. Several interesting cases were shown by local men. Dr. J. E. Naugle showed a case of "Colitis," demonstrating its progress with the protoscope.

E. P. HUMMEL, Secretary.

* * *

NORTHWESTERN COLORADO

Dr. George P. Lingenfelter and Mr. Harvey T. Sethman were the principal speakers at a meeting of the Northwestern Colorado Medical Society held February 4 at Steamboat Springs. The meeting was held at the Routt County Court House and was preceded by dinner at the Everready Cafe. Dr. Lingenfelter gave a talk on "Diagnosis of the Common Skin Disorders," illustrated with lantern slides. Mr. Sethman talked on "Pending Legislation."

DUANE TURNER,
Secretary.

* * *

PUEBLO COUNTY

The February 7 meeting of the Pueblo County Medical Society was held at the Hotel Congress. Dr. F. M. Heller presented a paper on "The New Aspects of Immunity."

The second meeting of the Pueblo County Medical Society was held February 21 at the Hotel Congress. Dr. Gerald B. Webb of Colorado Springs, President-elect of the Colorado State Medical Society, read a paper on "Pleurisy" and illustrated it with lantern slides.

J. L. ROSENBLOOM,
Secretary.

* * *

WELD COUNTY

Dr. W. W. Barber of Denver was the guest speaker at the February 6 meeting of the Weld County Medical Society held at the Greeley Hospital. Dr. Barber gave an interesting talk on "Nutrition."

TRACY D. PEPPERS,
Secretary.

COLORADO OPHTHALMOLOGICAL SOCIETY

December 17, 1932

DRS. D. A. STRICKLER AND E. R. NEEPER, PRESIDING

Drs. D. H. O'Rourke and John Long presented a case of a large conjunctival cyst which on removal proved to be a myxofibroma. Dr. F. R. Spencer presented a case of renal retinitis in a man of 69. For Dr. C. E. Walker, the secretary presented a case of iritis in a young man with a positive Wassermann reaction. Dr. G. H. Stine reported a case of glaucoma after cataract extraction. With Dr. C. E. Walker, the secretary reported a case of "glaucoma" cup from possible arteriosclerotic optic atrophy and with atropin delirium.

R. W. DANIELSON,
Secretary.

WOMAN'S AUXILIARY

SAN JUAN

The ladies belonging to the San Juan Auxiliary were invited to dinner with the County Medical Society on January 14, after which each organization held its respective meeting. The officers for the coming year of San Juan are: Mrs. J. C. Darling, President; Mrs. A. L. Burnett, Vice-President, and Mrs. H. A. Lingenfelter, Secretary-Treasurer. The members of the San Juan Auxiliary were deeply grieved last month over the death of Dr. B. Frank Walters, husband of the Auxiliary's retiring president, at Mercy Hospital in Denver.

PUBLIC RELATIONS OF THE MEDICAL AUXILIARY

One of the outstanding educational purposes of the Medical Auxiliaries is the wide field of work they may do in the Public Relations Department.

Members of the auxiliaries represent women who are members of the Parent Teachers' Association, Federation of Women's Clubs, American Legion and numerous other organizations. Their contacts with these organizations give them an outstanding opportunity to be an educator of health and to assist the A. M. A. in their national program for the prevention of disease by the promotion of health by periodic health examination.

With the advancement of science, many cults have arisen and through misinformation and a change in world economic conditions, the public mind is in a state of unrest which in many instances is unfortunately derogatory to the medical profession. Auxiliary members are in a position to give definite information and bring about a better understanding of the sincerity of the profession and the value of their scientific services.

There is no profession which has sacrificed and devoted its life to humanity as has the medical profession. The results and value of Medical Research, United States Public Health Service, and free medical care at all of our state institutions; the health condition of every city and rural section of our country is a tribute to the work of none other than the medical profession. Even the wheels of industry depend upon the health of employees.

The State Auxiliary believing the Study Envel-

opes sent out by the National Auxiliary will benefit our own members, has requested that these articles be used in various ways on the educational programs of our regular meetings. Some are being read by individual members and will also be used in other clubs. The County Presidents have this literature for distribution.

Mrs. A. G. Fish, President of Colorado Federation of Women's Clubs, has offered the Chairman of Public Relations her utmost cooperation for health programs. Many clubs of the Denver Federation have already offered to plan for a speaker to assist us in this educational movement. Joint meetings of Parent Teacher Association and Federated Clubs are planned for Rocky Ford and La Junta. Other auxiliaries are requested to follow this plan and to report to Mrs. C. H. Morian.

"Co-operation and Service" should be the watchword for assistance in getting the proper laws passed by our legislature, in the interest of public health. "Service is the price you pay for the place you occupy," so let every member of the auxiliaries become acquainted with our legislative bills, and help to stimulate co-operation and service among the doctors of our state.

The Denver Auxiliary will entertain the presidents of other clubs in March. One feature of the program will be a short talk on the purpose of our organization, and pamphlets "Go to your doctor before he has to come to you," and some literature on tuberculosis have been provided for distribution.

It has been thought if a definite program of "Preventive Medicine" could be accomplished through these organizations, it would be the highlight of services rendered by the auxiliaries this year.

MRS. C. H. MORIAN, Chairman.

TO ALL GENERAL HOSPITALS

The Executive Office of the Colorado State Medical Society is in receipt of an inquiry from the University of California School of Medicine, seeking the present address of Mrs. Ethel Newman (husband, George Newman), a former patient of the University Hospital. Mrs. Newman is believed to have been a recent patient of some county hospital in Colorado. The California institution is eager to communicate with Mrs. Newman, the inquiry relating to former treatment given her, of considerable importance to scientific research.

SPREAD THE WORD—

About the new address of the Colorado State Medical Society and its Journal, Colorado Medicine. We have obtained improved quarters at less rental, better to serve every member. The new address is 537 Republic Building, Denver. The telephone number remains unchanged, KEystone 0870. What can WE do for YOU?

Take this Journal home to your wife.

Colorado State Medical Society Officers, 1932-1933

President: Frank B. Stephenson, Denver.

President-elect: Gerald B. Webb, Colorado Springs.

Vice Presidents: First, Walter W. King, Denver; Second, Lawrence L. Hick, Delta; Third, B. Franklin Blotz, Rocky Ford; Fourth, William P. Gasser, Loveland.

Constitutional Secretary: Lorenz W. Frank, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone KEystone 0870.

Delegates to American Medical Association: Senior, Crum Epler, Pueblo; Alternate, J. N. Hall, Denver; Junior, John W. Ames, Denver; Alternate, A. J. Markley, Denver.

<i>Councillors:</i>	<i>Term Expires</i>
District No. 1 Ella A. Mead, Greeley	1935
District No. 2 G. P. Lingenfelter, Denver	1934
District No. 3 George D. Andrews, Walsenburg (Chairman)	1933
District No. 4 W. W. Crook, Glenwood Springs	1936
District No. 5 A. L. Burnett, Durango	1937

Standing Committees, 1932-1933

Credentials: Lorenz W. Frank, Denver, Chairman; W. A. Campbell, Colorado Springs; Harold T. Low, Pueblo.

Scientific Work: G. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; James J. Waring, Denver.

Scientific Work: B. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; J. J. Waring, Denver.

Sub-committee on General Scientific Exhibits: C. E. Harris, Woodmen, Chairman; F. M. Heller, Pueblo; Maurice Katzman, Denver.

Sub-committee on Roentgenological Exhibits: W. F. Drea, Colorado Springs, Chairman; K. D. A. Allen, Denver; L. G. Crosby, Denver.

Arrangements: John B. Crouch, Colorado Springs, Chairman; T. R. Knowles, Colorado Springs; John B. Hartwell, Colorado Springs.

Public Policy: Walter W. King, Denver, Chairman; H. R. McKeen, Denver, Vice Chairman; Edward Delehanty, Denver; Gerrit Heusinkveld, Denver; A. L. Beaghtler, Denver; W. W. Harmer, Greeley; O. D. Groshart, La Junta; L. L. Ward, Pueblo; A. C. Holland, Colorado Springs; F. B. Stephenson, Denver, ex-officio; L. W. Frank, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

Publication: C. F. Kemper, Denver, Chairman; C. S. Bluemel, Denver; William H. Crisp, Denver.

Medical Defense: W. W. Wasson, Denver, Chairman; C. F. Hegner, Denver; T. D. Cunningham, Denver.

Medical Education and Hospitals: C. N. Meader, Denver, Chairman; K. D. A. Allen, Denver; H. A. Black, Pueblo.

Library and Medical Literature: E. D. Downing, Woodmen, Chairman; Carbon Gillaspie, Boulder; F. W. Kenney, Denver.

Co-operation With Allied Professions: Harry S. Finney, Denver, Chairman; George R. Warner, Denver; John Andrew, Longmont.

Medical Economics: C. E. Cooper, Denver, Chairman; B. B. Blotz, Rocky Ford; Philip Hillkowitz, Denver.

Necrology: G. M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; Lee Bast, Delta.

Special Committees, 1932-1933

Postgraduate Clinics: Maurice H. Rees, Denver, Chairman; O. M. Gilbert, Boulder; C. E. Harris, Woodmen; Nolie Mumey, Denver; G. E. Cheley, Denver.

Workmen's Compensation Affairs: A. S. Cecchini, Denver, Chairman; L. G. Crosby, Denver; W. R. Waggener, Denver; J. D. Carey, Fort Collins; Lanning E. Likes, Lamar; D. H. O'Rourke, Denver; John Andrew, Longmont.

Veterans' Legislation: J. W. Ames, Denver, Chairman; E. B. Liddle, Colorado Springs; Crum Epler, Pueblo; L. H. Winemiller, Denver; Louis V. Sams, Denver.

Advisory to the School of Medicine: John S. Bouslog, Denver, Chairman; N. A. Madler, Greeley; C. O. Giese, Colorado Springs; C. E. Sidwell, Longmont; T. D. Cunningham, Denver.

State Registration Fee: R. W. Arndt, Denver, Chairman; Frank E. Rogers, Denver; T. E. Beyer, Denver.

Constituent Societies

Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Crysler, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, G. W. Larimer, Salida.

Crowley County—Second Tuesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, R. B. Porter, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, J. M. Lamme, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—First Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Thursday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

President, F. L. Beck, Cheyenne Vice President, J. L. Wicks, Evanston
President-elect, H. L. Harvey, Casper
Secretary, Earl Whedon, Sheridan Treasurer, Evald Olson, Meeteetse
Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne
Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas
Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:
EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

Dues, Please!

YOUR dues to the State Medical Society should have been paid before February 1. Some members have overlooked the time limit. You will have to hurry or the date on the secretary's receipt book will not please you in case of a malpractice suit. Send in your dues today and thus protect your few dollars against some fellow who might want them.

Ten dollars, please!



Wyoming Legislation

AS WE go to press the present session of the Wyoming Legislature is adjourning. Next month we will review the work of our lawmakers so far as it affects the health of the people of Wyoming and all laws covering the medical profession. Some foolish bills were presented and killed. Some good and fair ones were passed and signed by Governor Leslie A. Miller.

After the smoke has drifted away and the sky clears we shall report the results.



The Tonsil Stump

RECENT investigations have established the fact that a small piece of tonsil left in the throat after a partial removal is a dangerous thing, much more dangerous than its proportion of weight is to the total weight of the entire tonsil. In other words, if you take out three-quarters of a tonsil and leave

in one quarter you do not do away with three-quarters of the trouble—far from it. The truth is that you still have about 90 per cent of the trouble you had before the operation. This danger is due to the blood supply and the broken down resistance of the piece left.

Whenever you hear any operator saying he never leaves any little pieces of tonsillar tissue in the patient's throat after a tonsil operation, put him down in your book of memoirs as a member of the Ananias Club. If it is true that the most expert operators occasionally make errors—is it surprising that we little fellows sometimes fall down?

But what can we do about our own cases? Just one simple rule will save our patients and ourselves a lot of trouble. "Look for pieces at the time of operation and again every month for a few months."

As small a piece as a grain of wheat will enlarge and show up in a month or two like a grain of corn. We may fall down but there is no reason to stay down so let's inspect our work at the close of the operation and again once every month for a few months and thus do away with all stumps.

PRESIDENT BECK ATTENDS NORTHWEST MEDICAL COUNCIL

Our president attended the Northwestern Regional Conference at Minneapolis and upon his return we hope to have a report to publish in our April issue.

We feel proud to have Dr. Beck represent the Medical Profession of Wyoming at the Conference and we know he will return with new ideas and plans for a greater medical profession for the people of Wyoming.

THE THYROID GLAND FROM THE MEDICAL AND SURGICAL STANDPOINT*

W. ANDREW BUNTEN, M. D.
CHEYENNE

During the last half century tremendous progress has been made in the knowledge of the glands of internal secretion. Among the most important of these is the thyroid gland, the active principle of its secretion being termed thyroxin, which was isolated by Kendall in 1914 as an amino acid containing 65 per cent of iodine. Through the observations of Plummer and his associates, as well as many others, the relationship of the pathologic changes occurring in the thyroid gland to the symptoms produced by those changes, has been determined, and we are now able to classify with fair accuracy and to treat accordingly the various malfunctions of the thyroid gland.

Classification of Goiter

There are many classifications of thyroid disturbances. Almost any text book that treats of thyroid diseases has them classified in some manner. I will offer here the H. S. Plummer classification which, I feel, gives us a satisfactory differentiation of the various pathological types which are encountered:

1. Diffuse Colloid Goiter. This is also termed adolescent goiter and parenchymatous goiter.
2. Adenomatous Goiter without Hyperthyroidism. This is sometimes called simple goiter, nodular goiter, non-toxic, and struma.
3. Adenomatous Goiter with Hyperthyroidism. This type of goiter has been termed secondary hyperthyroidism, Basedowized goiter, Struma Basedowificata, and formes frustes.
4. Exophthalmic Goiter. This is commonly known as Graves' or Basedow's disease.
5. Adult Myxedema. (Hypothyroidism).
6. Infantile Myxedema. (Sporadic Cretinism).
7. Endemic Cretinism.
8. Destructive Lesions of the Thyroid. Tuberculosis, thyroiditis, septic, and malignant

conditions of the thyroid are included in this group.

The first three sub-heads are usually designated as the endemic goiter group, the third and fourth as the hyperthyroid group, and the fifth, sixth, and seventh as the thyroid insufficiency group. Such terms as "inward goiter," intrathoracic goiter, substernal goiter, etc., are convenient to designate the position taken by the enlarged or malfunctioning thyroid, but, inasmuch as they have no pathologic significance, should not be considered as a usable classification. They are merely helpful in the diagnosis of goiter where there is no visible enlargement, as well as at the time of operation. In this paper we will confine ourselves to a consideration of the endemic and hyperthyroid groups, with the destructive lesions of the thyroid hypofunction from the surgical standpoint.

Symptoms, Signs, and Diagnosis

On the basis of the above classification, the essential points of difference of the various types of goiter are as follows:

1. Diffuse Colloid Goiter. This is a symmetrically enlarged gland which occurs in young individuals between the ages of 12 to 20 years, and is more common in girls than boys. On palpation, a gland similar to that found in exophthalmic goiter may be noted, although the consistency is usually somewhat softer in the colloid type. Nervous symptoms are usually not found in this type of goiter, and the B. M. R. is generally below normal—at times as low as minus 15. According to Plummer, it is the earliest manifestation of an iodine deficiency. Cut section of the gland reveals acini distended with colloid material with flattening of the parenchymal cells.

2. Adenomatous Goiter without Hyperthyroidism. This consists of nodular, asymmetrical type of glandular enlargement produced by encapsulated or non-encapsulated adenomatous masses. Adenomas at times may be so small as to cause no appreciable

*Read before the Wyoming State Medical Society at Rock Springs, July 19, 1933.

enlargement of the gland itself, although of sufficient size and importance to entirely change the body metabolism. The age incidence is usually between 20 and 40 years. The B. M. R. is within normal limits in this type. The more or less discreet nodules will be observed on cut section of the gland, and microscopic examination shows intraadenomatous cellular hyperthrophy. Plummer's conception of the etiology of this type is that, following the development of colloid changes, if the insufficiency of iodine persists long enough, there is a tendency for new acini to form and which develop into adenomatous masses.

3. Adenomatous Goiter with Hyperthyroidism. This condition may occur either by itself or in association with exophthalmic goiter. The outstanding feature of the adenomatous type alone is the same as in the preceding group, namely, the irregular, asymmetrical gland, but, in addition, nervous symptoms are present indicating increased thyroid activity. Chief among those symptoms are: (1) elevation of the basal metabolic rate, about 30 per cent having rates of from plus 10 to plus 20; (2) increased pulse pressure with some degree of hypertension; (3) palpitation and tachycardia; (4) increased appetite with weight loss; (5) heat intolerance; (6) tremor of the hands with general nervousness and excitability; and (7) general and quadriceps muscle weakness. Inasmuch as this condition is merely superimposed upon the simple nodular type, the age incidence here is correspondingly higher, the average age being about 45 years. The onset of symptoms is slow, usually taking about fifteen years to develop after the beginning of the glandular enlargement. It has been said that the etiology is probably an increased amount of normal thyroxine furnished by the adenomatous masses over and above the needs of the body tissues. The gross and microscopic picture of the gland is the same as in simple nodular goiter.

4. Exophthalmic goiter. Here we find a symmetrically enlarged gland with a more firm consistency than the straight colloid type, but movable and less firm than that found in malignancy. The disease is cyclic in charac-

ter with periods of remission. The onset is rapid, the average duration being about four or five years. In addition to the symptoms found in adenomatous goiter with hyperthyroidism, we find: (1) exophthalmos (in about 65 per cent); (2) stare (in about 25 per cent); (3) extreme instability and excitability; (4) purposeless movements of the head, hands, and feet, and (5) in a certain per cent, diarrhea and gastrointestinal crises, the latter often being at first mistaken for diabetic coma, uremia, or increased intracranial pressure. The average age here is 37 years—lower than adenomatous hyperthyroid types by ten years. It occurs in females more often than in males in a ratio of 4.5 to 1. All hyperthyroid symptoms are accentuated in this type, and the B. M. R. is considerably higher, at times reaching well over plus 100. The finger nails, in many instances, show definite changes, often becoming lined and flattened with turn-up ends. The etiology, according to Plummer's two-product theory, is the presence of an abnormal agent of unknown character and unknown stimulus, which is superimposed upon or occurs concomitantly with an excess production of normal thyroxine. Iodine is used to control the abnormal agent and surgical removal of a portion of the gland to cut down the excess production of thyroxine. The improvement noted after the administration of iodine is very characteristic, and is distinctly in contrast with the absence of improvement in the adenomatous hyperthyroid types alone. Where the two conditions occur simultaneously, improvement will be noted after giving Lugol's solution in the proper dosage.

We will not dwell long on the destructive lesions of the thyroid except to say that these are encountered not infrequently. Operation with pathologic examination is often necessary before a positive diagnosis can be made. In glands showing thyroiditis, nothing is to be gained by surgery.

Differential Diagnosis

Among the various diseases and conditions frequently confused with hyperthyroidism are: Parkinsonism, acute abdominal disturbances, "heart trouble," diabetes, tuberculosis, and cancer. These mistakes can be

avoided often if complete general and special examinations are made, including x-ray tests, B. M. R., and the therapeutic administration of iodine in suspicious cases.

Medical Treatment

Colloid goiter should need no medical treatment and, above all, should not be given iodine, although iodine feeding has been recommended for the prevention of the condition in children in areas where it is prone to develop. Adenomatous goiter alone should not be treated medically, although Lugol's solution will be found to be beneficial in the preoperative treatment of this type when it is found in association with the exophthalmic type. In Graves' disease, iodine is necessary in the preoperative as well as the postoperative periods. In the control of cardiac complications, particularly auricular fibrillation and decompensation, either before or after thyroidectomy, the use of digitalis has been discontinued by Plummer and his associates, unless decompensation persists in spite of other treatment. We have found this to be true in the management of our own cases here. Lugol's solution, combined with a high caloric diet and plenty of rest, is usually sufficient to establish the function of the heart on a fairly sound basis.

Surgical Treatment

For convenience, we will divide this into three parts, namely, preoperative, operative and postoperative treatment, and deal with each phase separately:

Preoperative Treatment: Colloid goiter, if it is to be operated, and adenomatous goiter without hyperthyroidism, should have the usual preoperative measures of preparing any patient for surgery. The only indications we recognize for surgical treatment in these cases are (1) if the gland is so situated or has reached sufficient size as to cause pressure symptoms; (2) if malignancy or hyperthyroidism should develop, referring particularly to adenomas; and (3) for cosmetic effect where the patient desires to have the deformity corrected. Adenomatous goiter with hyperthyroidism, not associated with exophthalmic goiter, will probably not respond to iodine and should be operated upon as soon after development of symptoms as the pa-

tient's general condition will permit. Exophthalmic goiter alone, however, or in association with hyperthyroid adenomatous goiter presents a different problem. The symptoms produced by the abnormal agent should be attacked first with Lugol's solution in 10 minim doses three times daily, given in milk, for a period of from seven days to three weeks before operation, or until those symptoms are well under control and the patient has been reduced to the simple hyperthyroid state. A certain amount of daily rest is essential in the preparation of these patients for surgery, and the progress made with iodine therapy will in a measure determine the amount of rest required in each case. It is best to keep patients with exophthalmic goiter in quiet surroundings during their preparation on account of the extremely nervous and unstable character of their make-up. Where severe cardiac complications are present, absolute rest in bed is required for an indefinite period, or until such a time as it is permissible to allow them up. A high caloric diet is advisable during the entire period of treatment, before and after operation.

Operative Treatment: The earlier procedures of ligations, hot water injections, and multiple operations have now been largely replaced by sub-total thyroidectomy. It is sometimes necessary, however, to vary from the rule in patients with exophthalmic goiter. This is well illustrated in a statement made by Rankin, as follows: "The only indications which I recognize for multiple-stage operations are: (1) an extremely bad risk which obviously is the result of long-standing hyperthyroidism or general constitutional ailments; (2) local cause, such as a large goiter deforming the trachea and causing obstruction; or (3) cases in which operation has to be abandoned after resection of one lobe because of some technical complication, such as injury to the nerves or hemorrhage which is accompanied by sudden change in the patient's condition, with lowering of the surgical threshold of safety." In any type of goiter it may be necessary to consider multiple-stage operation in the face of any technical emergency. Radium has been used by some quite effectively in the treatment of

goiter, but surgical removal, even in malignancy, has proved quite efficacious in Pemberton's series. I do not believe that x-ray therapy should ever be used in these cases, as the results are none too promising, and the scarring produced by the rays interferes materially with the ease and success of operation, should it be later necessary.

Most goiters that become surgical require essentially the same operative treatment, although in adenomatous goiters excision of the adenomas may be all that is required. As to operative technic, in our cases we use the collar incision made about a finger's breadth above the clavicle, with midline division of the muscle planes and lateral division of the ribbon muscles when needed for exposure. We attempt to ligate the lateral veins in every case. Intracapsular enucleation of the lateral lobes and isthmus is carried out, with the superior thyroid arteries secured by means of stick-ties, and the remainder of the gland closed with a running mattress suture after ligating all bleeding points along the line of excision. We attempt to leave about one-third to one-half of the size of a normal lobe on each side. The isthmus is removed completely. I agree with Pemberton that it is wise to remove the pyramidal lobe in each case. The medial and posterior part of the capsule of the gland should be avoided in order to omit any chance of injury to the nerves and parathyroid bodies. For anesthesia we use a combination of local infiltration with 1 per cent novocain, supplemented with morphine sulphate grains one-sixth and scopolamine grains one-two-hundredth given hypodermically twenty minutes before operation, and sodium amytal grains three the night before operation with six to nine grains of the same given two hours before surgery. By this method we are able to produce a very satisfactory hypnosis and anesthesia, and still allow the patient to be roused for questioning at any time during the operative procedure. Complete hemostasis is obtained in every case, and a small Penrose drain inserted into the cavities from which the gland has been removed. The wound is reconstructed anatomically from within out, using chromic catgut in the muscles and the fascia

and continuous locked dermal sutures in the skin.

Postoperative Treatment: After operation the patient is returned to the room and placed in a semi-sitting position as soon as it can be maintained. This affords better breathing, helps to avoid pulmonary complications, and gives the patient confidence in his own recovery. The drain is removed on the third day after operation and skin sutures on the fourth postoperative day. Unless complications develop, they are allowed to go home on the fifth postoperative day. Lugol's solution is given in amounts of 50 minims by proctoclysis immediately upon returning from the operating room, and continued the following day, as before operation, in 10 minim doses by mouth, in patients who have exophthalmic goiter. Opiates and oxygen are used when needed. It is our practice to keep in close touch with all goiter patients for about three weeks after operation, and to have them report at intervals of two months for the next six months, depending upon the nature of their trouble and the rapidity of their convalescence.

Outline of Preventive Medicine

It is no longer open to question that the relation of the private physician to the community has undergone a great change during the past quarter century, and that one of the main features of this change is the community's demand for service in the field of preventive medicine. Unfortunately our medical schools have not made sufficient change in their curricula to give their students adequate instruction and training in this important branch of medicine, so that a large proportion of our present-day physicians are not sufficiently prepared to supply the preventive services demanded by their clientele. Moreover, until recently there was available no reference handbook to help meet this need.

Three years ago the Committee on Public Health Relations, New York Academy of Medicine, prepared an Outline of Preventive Medicine, enlisting for this purpose a number of distinguished physicians, each an acknowledged specialist in his particular

field. This outline, published in book form, was so well received that a revised and enlarged edition has been called for. This second edition, which has just come from the press, contains three new chapters and additional material in many of the other chapters. Altogether it makes a very handy volume of nearly 500 pages, covering all phases of preventive medicine as it applies to the practicing physician.

Here is an authoritative volume which deserves to be carefully studied by physicians generally, but especially by the general practitioner. The relative tardiness of the medical profession in recognizing the value of the periodic health examination has resulted in the creation of corporations undertaking this work on a commercial scale. Yet it is a service which can be rendered far better by the family physician and which should constitute an important part of his practice.

The book is well printed, handsomely bound and very convenient in size. It is published by Paul B. Hoeber, Inc., New York—From Weekly Bulletin of New York City Dept. of Health, December 3, 1932.

Facts About Gonorrhea

Gonorrhea has been fitly called the "Fourth Great Plague," for according to reliable figures it is afflicting at any given time "more persons than ever have been, or will be, the victims of cancer, tuberculosis, and syphilis combined." This is a disease which ranks second to measles in prevalence and is reported six times as frequently as typhoid fever. Dr. Taliaferro Clark has given as the attack rate for gonorrhea 679,000 new cases a year, for the country as a whole.

Although there are five times as many new cases among the male population as among the female, the real social significance of the disease lies in its prevalence among women. The tremendous toll in suffering and even death from various complications following a primary infection cannot be estimated. At least 40 per cent of the cases of sterility in women can be laid at the door of this disease and 50 per cent

of all gynecological operations are a result of gonococcal infections. The disease in male patients is not, generally speaking, as serious as in the female, but with unskillful treatment severe complications and sterility may occur.

WYOMING NEWS NOTES

LANDER

On December 17, 1932, the Society had a very pleasant dinner party and business meeting at the home of Dr. and Mrs. E. L. Jewell in Shoshoni. The members present were Doctors Replogle, Jewell, Tonkin, Smith, Holtz and Wilmoth. Special guests were Dr. and Mrs. H. T. Harris of Basin, Dr. J. B. Nagle of Worland, Dr. G. W. Taylor of Cross Creek, and Dr. V. A. Mokler of Thermopolis. The program consisted of a discussion of various legislative matters of interest to our profession and a presentation of two interesting clinical cases by Dr. P. R. Holtz.

NORTHWESTERN WYOMING MEDICAL SOCIETY

The regular quarterly meeting of the Northwestern Wyoming Medical Society was held in Basin Feb. 3, 1933, following a banquet at the Lockhart Cafe. The following doctors were present: Dr. F. A. Mills of Powell, Dr. S. L. Myre of Greybull, Dr. C. E. Harris and Dr. H. T. Harris of Basin, Dr. Paul S. Read of Worland, and Dr. Carl L. Koehn of Thermopolis.

Dr. Carl L. Koehn of Thermopolis, Dr. O. T. Nuttall of Gebo, and Dr. Guy W. Taylor of Grass Creek became members of the Society upon unanimous consent of the members.

A resolution was sent to the Governor endorsing his appointment of Dr. Nagle and Dr. Olsen to the State Board of Health. Also another resolution was sent to him opposing the house bill which would permit the sale of drugs and poisons by any merchandiser.

The remainder of the meeting was given over to a discussion of the economic situation and its effect on the medical profession.

LARAMIE COUNTY MEDICAL SOCIETY

At a meeting of the Laramie County Medical Society February 13, the following officers were re-elected: Doctors Galen A. Fox, President; W. K. Mylar, Secretary; W. R. Day, Treasurer. Dr. R. J. Boesel was elected Vice President.

The Society voted to hold monthly meetings with luncheon and program.

Bills passed by the Wyoming legislature thus far in which the medical men are interested are one correcting a defect in the present medical practice act and one which makes the appointment of an osteopath to the Board of Medical Examiners—a custom which has been followed for the past fifteen years—a legal requirement. A bill for sterilization of mental defectives under certain conditions was defeated, as was also a bill requiring physical examination of females—examination of males is now required—as a condition for granting marriage licenses.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Vol. VI

March, 1933

Number 3

THE value of procedures for putting the lung at rest in the treatment of tuberculosis is established. The several methods used are pneumothorax, interruption of the innervation of the diaphragm or the muscles of respiration, removal of portions of the ribs, the insertion of foreign substances or structures between the ribs and pleura, and intrapleural pneumolysis. Recently, a new measure, scaleniotomy, has been suggested for obtaining surgical rest of the lung. Abstracts of two articles on this subject follow.

SCALENIOTOMY—A PRELIMINARY REPORT

Scaleniotomy is the division of the fibres of the scaleni muscles for the purpose of decreasing the motility of the upper chest. This procedure was advocated by Kochs, Els and Junkersdorf in October, 1930, and independently by Gale and Middleton in July, 1931. After their preliminary work the authors felt that they had established apical rest satisfactorily and that the procedure may be a valuable aid, either in conjunction with phrenic exaeresis, or when phrenic exaeresis has failed and some measure of a relatively conservative type is to be attempted before the patient is subjected to a more radical operation.

Mechanism of Scaleniotomy

The scaleni are three muscles (sometimes four) of the deep cervical group. They arise from the transverse processes of the third, fourth, fifth, sixth and seventh cervical vertebrae, and are inserted by tendinous bands into the first and second ribs. The scaleni provide anchorage for the first three ribs so that the intercostal group may function on them. Paralysis of the scaleni results in a caudad (toward the posterior) movement of the upper three ribs and exaggerated outward movement of the costal margins on inspiration. This tends to immobilize the pulmonary apices.

Under local anaesthesia the scaleni are carefully dissected out and divided as near their insertions as possible. Injury to the subclavian artery and the lower cervical nerves must be avoided. (The surgical technic is clearly described by the author.) When the wound is closed there is a cavity about the size of a pigeon's egg, the severed edges of

the muscle having retracted usually 1.5 inches. No bridging with muscle fibres was observed as late as six months after operation.

"The results obtained from phrenic exaeresis depend upon the changes in the relationship of one part of the diseased lung to another; and the relaxation and rest. The amount of improvement is not dependent entirely upon the height to which the paralyzed diaphragm rises in the thorax, although in the main this is so. Some improvement may usually be expected from phrenic exaeresis in lesions throughout the lung, especially in the lower three-fourths. In the more remote apical lesions, not so much improvement may be hoped for, and it is in these cases that scaleniotomy may be expected to change the anatomy, and the relationship of diseased parts to each other, and rest the area involved.

"In all our cases, as in the cases reported by Gale and Middleton, a marked reduction in the respiratory excursion of the upper part of the chest was noted, due to decreased intercostal movement; and, when the combined operation was done, there was no increased upper intercostal movement, so often seen when the phrenic nerve alone is blocked or evulsed.

"When scaleniotomy is combined with phrenic exaeresis, upper as well as lower lung lesions may be expected to improve.

"When scaleniotomy alone was done, very little reaction occurred; three of the cases ran fever for one week, and in two the pulse-rate was increased for two weeks. No complication has occurred, nor has any deformity resulted. The results in these

cases are based on their clinical records and clinical progress."

The results in a series of 52 cases were as follows:

Of 20 cases in which a phrenic exaeresis had been done previously, and in which improvement had stopped, ten were improved and ten not improved.

Of 29 cases in which scaleniotomy was combined with phrenic exaeresis, 19 improved and ten did not improve.

Of 3 cases in which scaleniotomy only was done, two improved definitely.

Scaleniotomy in the Treatment of Tuberculosis, Meade Glyne, Am. Rev. of Tuberc., Dec., 1932.

SCALENIOTOMY AS AN ADJUNCT TO COLLAPSE THERAPY

Fisher discusses the merits of the various methods of collapse therapy and comments on the results of 31 scaleniotomies done at Waverly Hills Sanatorium. Eighteen of these had had phrenic exaeresis from six months to three years previously without obtaining satisfactory contraction of the lesion. The remaining 13 patients were subjected to combined phrenicectomy and scaleniotomy. In every case the inspiratory elevation of the ribs in the upper portion of the hemithorax has been markedly reduced or eliminated as noted on inspection and fluoroscopic examination. By actual measurements in comparable X-ray films, the caudad drooping on inspiration showed as much as a 2-cm. narrowing in the upper hemithorax. "A downward pull on that side, accompanied by a sense of weight over the upper half of the chest, was voluntarily noted by practically every patient in the series. Cough and expectoration tended to show a moderate increase the first day or two, later subsiding or disappearing altogether. Likewise, moderate dyspnoea was temporarily noticed by a number of patients, as indicative of a transitory reduction of vital capacity. In the patients who had had a prior phrenicectomy these symptomatic effects could definitely be attributed to scaleniotomy alone."

Other favorable results noted include release of tension on cavity walls, the ability to sleep without being awakened by a strangling cough, ability to control cough, no recurrence of haemoptysis in two patients in whom it had been frequent before, normal temperature in one patient with

fever of long duration. Reduction with clearing throughout the lesion was noted in several.

Summary

The author summarizes as follows:

"Scaleniotomy affords a definite adjunct to collapse therapy and deserves consideration, along with phrenicectomy, in a certain proportion of cases."

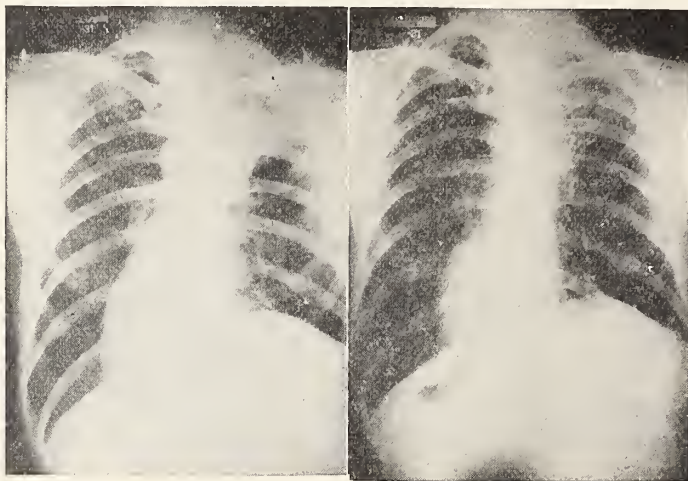
"The effect is probably more nearly that of relaxation rather than of true compression, although a negative sort of compression is obtained by eliminating the upward, inspiratory pull exerted by the first and second ribs upon the apex of an adherent lung. Slight narrowing of the upper hemithorax has been shown."

"Striking improvement may be produced by scaleniotomy in a relatively short time, although progressive gains may reasonably be expected to continue over an extended period."

"In a series of 31 cases, some persistent cavities having lung tissue around them have been closed or markedly reduced in size within a very few weeks. Others which were subpleural have been definitely flattened by costal drooping."

"Symptomatic improvement begins immediately in most cases. Relief from cough and decreased expectoration have been consistent effects. Prevention of recurrent haemoptysis and rapid reduction of temperature to normal have been noted."

Scaleniotomy as an Adjunct to Collapse Therapy, Lincoln Fisher, Am. Rev. of Tuberc., Dec., 1932.



A 6-cm. Cavity Present for Three Years.
Marked Clearing and Contraction in 4 Weeks; Phrenicectomy
2 Years Ago Resulted in No Improvement.

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EDITORIAL NOTES AND COMMENT

Enemies of Society

AN ADDRESS was read at the annual meeting of the New York Academy of Medicine, last November, by Professor Walter B. Cannon of Harvard Medical School. The paper has been published in the Scientific Monthly for February. A scholarly treatise upon medical progress, the encroachments and inhibitions which would be placed thereon by pseudo-scientists and prejudiced reformists, it should be broadly read by intelligent laymen.

Dr. Cannon interprets the history of our race in terms of a gradually expanding freedom—freedom from slavery and tyranny, liberty of speech, freedom from the limitations of the elements, time, space, and communication. Our profession is justified in a pride with the role it has played in this process. The author reviews at length the thralldom of plagues and pestilences throughout history, depicting the scourges which took millions of lives in great epidemics. He describes our victories over the Black Death, diphtheria, yellow fever, typhoid, hydrophobia, diabetes, pernicious anemia, smallpox, and the mitigation of meningitis, tuberculosis, puerperal and surgical sepsis.

As uncertainties have been removed and through knowledge we control the enemies of mankind, society owes medical investigators an incalculable debt for relief from pain, terrible disease, and early death. With this understanding, one comprehends the reason for medical education superseding all other professions in length of training. What,

then, of the scorers of the need of such discipline and who pose as experts in the cure of disease? Dr. Cannon brands them as "enemies of society," these faith healers who deny the existence of disease, the -paths and the -practors. They have never been credited with any discoveries which have brought benefit to humanity.

The high standards of medical education and practice undoubtedly account for many seeking admission through the back door to the realm of healing art. One reason for their patronage is the overgrowth of specialism in medicine and the attendant transfer of patients from one office to another. Another reason is the inappreciation by physicians of the psychic element in illness. The charlatans are trained to sell their wares, appealing chiefly to this element. An enlightened society would not tolerate exploitation of its innocent members in need of professional service.

Another group of enemies are the anti-vaccinationists. They ignore the fact that in the eighteenth century 80 to 90 per cent of the people were marked as survivors of smallpox, and the majority of victims were under ten years of age. They overlook the records which prove that two-thirds of the inmates of asylums for indigent blind had lost their sight through smallpox. Other disregarded facts are such as these: smallpox mortality in well-vaccinated countries is 1 per 1,000,000 population per year as compared with 20 to 176 times that many in those countries where vaccination is less enforced.

The antivivisectionists constitute another group of public enemies. They comprise women, clergymen, lawyers, writers, actors, and business men—all misinformed. Their far-flung testimonies are never made on the basis of experience. Never do they bear out their charges by actual inspection. Poignant and irrefutable is the following quotation:

"We force the harnessed horse to work, and in time of crisis, we drive him with lash and spur. We rob the mother cow of her calf, and then appropriate her milk. We permit the dehorning of cattle and their branding with hot irons. We do not object to the most shocking barn-yard operations, performed (without the sniff of an anesthetic) merely to make more palatable the flesh we eat. We slaughter ruthlessly, for sport, myriads of birds and beasts. Myriads more we slaughter for their furs and feathers. We kill for food every year in this country more than 50,000,000 bees, sheep and hogs, and also 250,000,000 chickens, turkeys, ducks and geese. In nineteen of the largest cities in the United States more than 350,000 dogs and cats are destroyed annually, merely to clear the streets. Vermin and wild animals we subject to death in uncertain traps or end their existence with distressing poisons. If all injury and destruction of animal life is immoral, why do the antivivisectionists select as an object for attack the treatment of the relatively few animals employed in the laboratories with the object of reducing pain and suffering in the world?"

Whenever any other professional group can emulate an altruistic record such as ours, we may feel our traditional reputation is impaired. In the meantime, may we not point with pride to our human service in the abolishment of disease? It will not harm our traditional reticence and humility to direct the attention of intelligent and unprejudiced individuals and organizations to such an article as this of Dr. Cannon. Perhaps our legislators would find it worth their while—in behalf of the people whom they represent.



Increase Medical Society Membership

REALIZING that sustained memberships in our medical societies is more vital at this time than ever before, we wonder whether every eligible non-member has been properly contacted. Many physicians, particularly those who are in their earliest years of practice, are unfamiliar with the mechanism of affiliation. Some are undoubtedly awaiting invitation.

May we suggest that members knowing

of suitable unaffiliated candidates inform the local society secretary. The secretary will invite the doctor to attend meetings and will explain the manner of application and election to membership.



Alcohol Content of Beer

INTERESTING comments upon the question of intoxication are now seen in the lay press. When is a man drunk, and how much alcohol did it require? The opinions of experts have barraged the House Ways and Means Committee. Professor Henderson of Yale states that it is virtually impossible for a man to get drunk on 4 per cent beer. However, Hyman, pharmacologist at Columbia, is unwilling to ignore the possibilities in four glasses of 4 per cent brew. Hollingsworth, psychologist at the same institution, declares that 2.75 per cent beer in large doses may impair the safety of person and property. Another group of workers would determine drunkenness, its presence or absence, by a quantitative study of blood-alcohol. Howard Kelly brands alcohol, in any quantity, a proved poison. Professor Abel, also of Baltimore, attributes alcoholic euphoria to a detrimental paralysis of the nerve centers.

The problem involves human behavior. Who, we ask, can measure that with scientific precision?



Oxygen in Pneumonia

STATISTICS now available indicate a reduction of 10 per cent in the mortality of pneumonia cases treated with oxygen. Unfortunately its use has often been instituted late in the disease with the patient desperately toxic or the circulation badly damaged.

Realizing that complications may arise suddenly in apparently mild cases, we might to advantage institute oxygen therapy more early. Such procedure will obviate many regrets and considerable criticism. The use of oxygen is rapidly gaining prominence, among our laymen, as a life-saving method;

in this respect it compares with the transfusion of blood. Such therapeutic measures have not ceased to be spectacular, and such recognition has been well earned.

Whenever it is said, "A blood transfusion might have saved him," or "Why didn't they give him oxygen," our profession is being criticized. Their early and judicious use should hold a prominent place in our therapeutic armament.



Remove the Label!

ABOUT two weeks ago we observed the postman in our doctors' buildings sorting and distributing packages from a large pharmaceutical house. By the proprietary name, anyone is instantly informed that the preparation is a tonic. That is one of the reasons the Council on Pharmacy and Chemistry has declined to recognize it. Another reason is that its makers have reverted to the time of shotgun doses; the formula is so involved that we are amazed thereby, and its literature admits it is good, in fact, elegant. Still another reason for its exclusion is the unwarranted therapeutic claim.

Last week we observed a buxom patient on a down-going elevator, one of these packages securely tucked under her arm. What she wanted with a tonic was not obvious; probably it was for the frail daughter of her sister's neighbor. At any rate, she got the medicine from the nice doctor for nothing. That is just what the manufacturer anticipated. Indeed, that is his favorite means of marketing the product, and the doctor's implicit endorsement is a valuable by-product. "It must be all right; my doctor recommended it. The name is _____. You can get it at 'most any drug store.'"

And we wonder what is happening to our business! Plenty, of course. But here is one definite thing, self-medication, which we unwittingly encourage and endorse. If the product is any good, no need to discard it, especially when we all have patients who can use food to better advantage than drugs. But why not, if you please, remove the label?

Status of the Coffey-Humber Extract

FOLLOWING the usual maelstrom created by the spread of distorted and exaggerated interpretation of scientific endeavor, we frequently wonder what is the actual status of the work which was the unfortunate victim. A clinical and pathologic study of results has been conducted by the physicians of the W. K. Kellogg Foundation. Subcutaneous injections of suprarenal cortex substance were given to 415 patients with carcinoma or sarcoma by representatives of Drs. Coffey and Humber.

Most of the patients were ambulatory and the majority were reported as incurable by surgical or radium therapy. Diagnosis was established by microscopic section in 326 cases and by x-ray or exploration in the others. The largest groups included carcinoma of the breast, uterus, rectum, and stomach. The extract was injected twice weekly following three or four initial doses.

There was no general observation of lessened pain or use of narcotics. Of the patients observed in this series, 264 are known to have died; the mortality being 63.6 per cent from June, 1930, to July, 1931. The mortality among those who had had operation and no radiation was 59.4 per cent; of those who had had operation and radiation, 65.6 per cent; of those who had neither operation nor radiation, 66.0 per cent; and of those who had had radiation and no operation, 66.6 per cent. Tissue necrosis could not be differentiated from that naturally occurring in malignancies. No selective influence of any kind was observed in the action of the treatments; some of the growths increased in size and new metastases occurred. No tumor disappeared among those of this group.

Any benefits observed from the use of this extract seemed to lie principally in improved muscle tone, appetite, and general well being. This prevailed among some of those patients who were ambulatory and not far advanced toward the inevitable termination.

DOCTOR, PATIENT AND STATE*

C. E. COOPER, M. D.
DENVER

This paper, because the subject is large, must deal in generalities. "The health of every individual is a social concern and responsibility. Medical care, in its widest sense for every individual, is an essential condition for maximum efficiency and happiness in a civilized community."

We seem to be passing through an economic period which will change many of our present customs and ideas. The physician and his methods of practice cannot expect to escape. He must anticipate events and change his conduct accordingly. Good health is an integral part of human activity, and as ideas and standards of human relationships change so must the procedure of the physician and his art. Paternalism for some and insurance for others appear to be in the offing.

Today there is a flight away from personal or class responsibility. No sense of disgrace attaches to the individual who can successfully avoid his obligations. Depressed industries hand their troubles to the government; growing classes hand their problems of illness to the doctor, the government, or a charitable agency; corporate managements pass theirs to security holders; and the government in turn hands the mess to the taxable minority. The world is surely cock-eyed.

Some sort of socialization of medicine is inevitable, and the physician must make it his business not to bear the brunt and absorb the expense of it. The time has come to change his intense individualism to an equally intense cooperation.

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 8, 1932. On account of limited space, a list of references has been omitted, which may be obtained by any interested reader from Dr. Cooper or the Colorado Medicine office. Space also precludes the publication of the discussion which this paper incited. Acknowledgment is hereby made to Drs. W. B. Yegge, Thad P. Sears, F. W. Kenney, R. W. Arndt, Robert Levy, Edward Jackson, J. W. Ames, Maurice H. Rees, Thad C. Brown, C. O. Giese, T. R. Love, R. H. Finney, Mr. H. T. Sethman, and the author for their discussions of this splendid paper.

The rapid advance of medical science and its applied art is a major event, but not the major event in the evolution of present conditions. Naturally it must be paid for. Too frequently it is a strain on two classes of pocketbooks: one which possesses only the necessities of life, the other in which very little if anything is left after purchasing the luxuries of life.

The major event producing our present economic stress is the introduction into the public's standards of living of pleasant luxurious non-essentials, distributed on the installment purchase plan, which absorb most or all available income, leaving neither credit nor assets with which to meet unexpected and unwelcome obligations of illness. There is also a wage standard for lower incomes inadequate to meet the costs of ordinary modern medical care.

I aim to show that the care of an ordinary illness is readily purchasable by most people; that physicians' fees are not outrageous, but that the total amount of a serious illness where consultative, surgical, hospital, nurse, and ancillary diagnostic facilities are necessary, is often a burdensome debt because of its unexpectedness and the debtor's unpreparedness; that such cases are in a minority and furnish the material for attacks on the supposed extravagance of medical care.

When, as now, the physician finds it increasingly difficult to maintain income, he should alter his attitude toward the source of his compensation, the patient, and consider procedures and methods designed to transfer the cost from the individual to the many. These include payment from some division of government or from indemnities under insurance.

The environments of life are constantly changing. The physician is not immune. He does not wish to change, but the altered attitude of the public toward him and his fees is the starting point of his capitulation.

Looking at present conditions and reviewing events of several past years leading up to them, we wonder what is happening to us!

Less business, poor collections, more charity, more bargaining, public condemnation in lay magazines, and more difficulty in meeting our own business overhead and modest family obligations! For several years we have had old patients with new cars, new homes, new golf clubs, new furniture, new travels, new clothes, new complexions, new social standings, new paper profits, new egos, new and myriad excuses, but old unpaid accounts on our ledgers—new patients with new promises but no new money—new patients wanting indefinite postponement of our remuneration, or our influence to be admitted to some free institution. These and many other situations, the outcome of modern standards of possession, the cost of high living and the necessary cash payments at filling stations, as well as the monthly installments on the purchase of repossessables, cause us to pause and ask ourselves, what is the future of medicine going to be?

Many new institutions supported by government or large private fortunes have arisen designed to render free or part-pay medical service to a continuously growing class of people. Too frequently they are the outcome of disadvantageous alliances between the profession and great wealth. Though intended to relieve distress, the result of their gift to many recipients is destruction of personal integrity and self respect, making permanent moochers out of temporarily embarrassed valuable citizens. The physician views with alarm the growing competition these institutions offer him, especially among middle class incomes which are the bulk of the average practice, and also the encroachments of organized minorities of his own colleagues and other organizations considered to be his allies.

Quoting W. G. Morgan, J. A. M. A., June 28, 1930, "The list is long and steadily growing longer of agencies, medical, quasi-medical, and plainly non-medical, which have for their object some form of medical oversight, guidance, education, and what not, and all under the guise of physical or mental betterment." Sir Arthur Newsholme says, "To a preponderant extent encroachments on private practice have been initiated by and

continue to be due more and more to the activities of social workers and of medical practitioners themselves, impelled by the opportunities for exercise of special skill and by the benefits which accrue from this treatment of patients in hospitals." Perhaps in the viewpoint of twenty years hence these events will be regarded not as encroachments, but as the glories of pioneering, of what will then be medical practice.

We are inclined to discuss the admission of some patients into our free institutions who, to all appearances, should be excluded. What is a charity patient? Recent prosperity and our machine age have greatly changed life's environments and responsibilities. It would therefore help materially if some professional organization, this Society or the A. M. A., would define a charity patient and list the essential conditions under which the physician is expected to render free service, as well as list those ordinary possessions which would disqualify the possessor for such attention. Physicians would then have a better idea of what is expected of them and there would result a more unified opinion and cooperation toward this question about which there is so much discussion.

In former years natural causes made the selection of our charity patients: i. e., ignorance, real poverty, alcohol, syphilis, tuberculosis, pneumonia, etc., wrought havoc among the poor and forced them into our institutions. This is all changed now. A new industry, Social Service, makes the selection. The fact that Social Service exists is an evidence of an awakened society to its responsibilities of a social order.

We have standardized medical procedure. The glamor of the great physician and surgeon is disappearing. The patient can get first-class attention in his own town and hospital. Better trained men render it. This is as it should be and has its effect in reducing fees and income. The paramount question with the usual patient today is one of price, more than of skill or reputation.

The public is staggering under the load of installment contracts and struggling to forestall repossession and the loss of what has already been paid. No amount of ex-

perience can convince some that thrift is a real virtue. Installment buying is here to stay and must be reckoned with.

The problem of over-production of doctors contracts the field of medicine, and the problem of a living is a real one for the young physician. To contact a demand is difficult, occasionally a matter of good luck. To create a demand in the over-crowded areas is too discouraging. It seems that everywhere there are more than enough.

The death rate within the profession, in 1931, 2952, is approximately one-half the graduate rate, 4735². In addition the group-volume business developing among the lower income classes, the growth of industrial medicine, the decreasing incidence of infectious disease, the automobile, good roads, telephone and hospital have made it possible for today's established physician to do more work and offer far greater competition to the young man than formerly³. I should add that the percentage of the number of remunerative patients has also decreased; this is a real factor for the prospective doctor or his advisors to consider. We must absorb 6500 new physicians annually. The average annual income of the physician is about \$4,000; net income about \$2,800. It is unreasonable to expect a corrective voluntary reduction of doctor output by our medical schools. Such would increase the cost per physician produced to the extent of closing the school in some instances and obviously to a discontinuance of salary of the teaching personnel. More can be expected by educating the prospective medical student. Let him be told what the conditions are and what to expect. Correct his delusions as to the opulence of the profession and advise him to seek larger and expanding fields rather than the small and remuneratively contracting field of medicine. This should properly be done by the A. M. A., as it is a large and expensive undertaking.

Industrial medicine is on the increase and is developing efficiency. The Endicott-Johnson Corp.⁵, manufacturers of shoes, conducts a medical service for its employees and their dependents, which is most complete. It cares for 34,000 individuals, costs

\$900,000 a year, at the rate of \$21.81 per person, per year. The personnel includes twenty-eight physicians, four dentists, sixty-seven trained nurses, and thirty-two technicians. Each physician averaged 1214 patients, about double that of the non-industrial doctor. The smallest net salary paid the physician is \$3000 and the largest \$11,000. They are by no means penurious net salaries. It has been in existence ten years, is satisfactory to the employees, furnishes equal quality of service as rendered by non-corporation physicians, and does not trespass upon the outside individual practitioner. If Endicott-Johnson can do this, so can other corporations or groups of small corporations.

At the present time "four hundred different business enterprises have established more or less complete medical services for their employees" and "approximately 2,000,000 workers are estimated to receive more or less complete industrial medical service⁶. In Oregon and Washington and elsewhere, private insurance companies insure employees against the costs of medical care. They contract with physicians and hospitals to serve policy holders, and they pay the bills. These policies are usually available only to groups of employees. In California insurance companies write medical care insurance for individuals and groups of employees. In Roanoke Rapids, N. D., employers have combined to furnish employees and families with medical and hospital care, resulting in a community medical service. Medical care for a small fee is offered to students, and in some instances faculties, in our leading universities. Employees of small corporations, not large enough to maintain a system of medical service, may and do group together and contract with a physician or group of physicians for such service. Even large employees' mutual associations contract, usually with a group of physicians, for medical care. This is done in Dallas, Houston, and Fort Worth. In Los Angeles, an employees' association with a membership of 3000 families has contracted with a clinic for medical care, including families at \$2.00 per month per wage earner. This clinic has also contracts with other

employees' associations. In Fort Smith, Arkansas, there is an association which had 5800 memberships in 1931 and furnished 5000 hospital days of care to members and families. In Baton Rouge, La., 2700 employees of a Standard Oil Co. have established their own clinic owning its building and a complete equipment⁶. The provisions of the contracts vary, but they all have the fundamental idea of obtaining complete medical care for a small fee, through group dealing on a volume basis. In effect it is a successful form of health insurance. If the group-volume plan of securing medical care becomes popular, and why shouldn't it, we will have twice as many doctors as we can use. Competing groups will be formed, underbidding will result, ending in the inevitable effect of poor medical care. Some corporations, in addition to a medical service, maintain social and financial activities for their workers, such as stock purchase plans, home loans, schools, insurance, etc. I mention this to show the trend of corporate management thought in the direction of accepting the normal personal obligations of the individual.

Corporations want low cost medical service; it increases the purchasing power and contentment of employees. They want good health for the nation, because illness is a sales resistance to their goods and interference to the completion of contracts. Controlling almost everything, it is quite possible that corporations will eventually control medicine through industrial medicine activities and insurance. That would be a catastrophe.

It has been suggested that the profession collectively has potential political power. I doubt it. Its members would never act co-operatively. It is thought that this influence could be used to persuade Congress, even though solicited by powerful commercial interests which would otherwise benefit, to stop building hospitals for veterans and increasing the bed capacity, 103,000 in addition to the 25,920 in existence in 1931⁷, and might be a formidable adversary to the proponents of such a scheme. This is probably a delusion. However, acting together they certainly are able to solve their internal

problems.

This introduces the question of the veterans. "The problem which presented itself immediately after the war: What will the nation do with its returning soldiers? has been reversed. The question now is: What will the returned soldiers do with the nation?" This veterans' problem is essentially one for the nation at large and especially the taxpayer. That medicine and its allies are singularly menaced by its program is true, but it is a problem of greater magnitude, national in scope, and thus far in its major aspect a tax issue.

Taxation is the most important question before the people today. Ordinarily it is an exaction from the few for the benefit of the many. In this instance it is an obligation of the many for the benefit of the few. In our national thought we are accepting the idea that more and more of the fruits of our industry are to be distributed through the process of taxation. "War veterans are at present costing the Government \$900,000,000 a year. The figure does not include the \$3,500,000,000 lump sum which the bonus is likely to pile on⁸." A Republican Senator and an officer of the Administration figured out that by 1945 the Government would be paying \$3,000,000,000 per year to ex-soldiers⁸. If its hospital plan is fulfilled it will add 11½ per cent to the total number of 892,934 beds, and 31½ per cent to the total non-government beds, of which there were 325,500 in existence in 1928. If the government must treat and hospitalize all veterans, it would be in the interest of economy to contract with hospitals now existing and operating at 50 per cent to 60 per cent of capacity, rather than build new institutions and thus cripple the \$3,000,000,000 industry of hospitalization.

"In 1930, approximately 70 per cent of the admissions to veterans' hospitals were for disabilities that were not of service origin⁷." The effect of this is obvious. Just that many cases were taken out of the field of private medical practice and more and more will follow. The precedence to be established in this hospitalization plan is fraught with grave consequences. If the federal government is justified as a matter

TABLE 1

AVERAGE CHARGES FOR MEDICAL CARE PER FAMILY AND PER INDIVIDUAL DURING A TWELVE MONTHS' PERIOD

4,560 Families of Various Income Levels in 13 States, During 1928-30

Income Group	Number of Families	Average Number of Persons per Family	Average Charges	
			Per Family	Per Individual
Under \$2,000	1,788	4.7	\$ 71.48	\$15.28
\$2,000 to \$3,000	1,372	4.5	\$102.76	\$22.77
\$3,000 to \$5,000	723	4.5	\$145.63	\$32.70
\$5,000 and over	677	4.0	\$311.06	\$76.86

of political expediency in creating an enormous number of hospital beds for the veterans and federal employees, is it not also reasonable, as a matter of political expediency, for states and municipalities to do likewise or to open their hospitals already operating to political employees and pensioners? That there will be a demand for it is unquestionable.

We have heard much about the cost of medical care. What is it? Quoting from a report issued by The Committee on the Costs of Medical Care showing the inclusiveness of the investigation as follows:

THE COSTS OF MEDICAL CARE: PRELIMINARY REPORT

"The schedule used in the study is designed to show in detail the history of each illness in a family during the period of twelve months, the type and amount of medical care received, and all financial obligations incurred during that time for medical care. For the purposes of this study, an illness is defined as any disorder which wholly or partially disables an individual for one or more days or for which medical service of any kind is received. Any symptom or disorder for which drugs costing 50 cents or more are purchased is considered an illness. Nursing, dental and eye care, treatments by osteopaths, chiropractors, and Christian Science practitioners, professionally or self-prescribed medication, laboratory work, health examinations and immuniza-

tions, and other items are included. Free work by practitioners, hospitals, and clinics, illnesses for which no practitioners are called, and minor ailments are recorded as consistently as costly major operations.

"All persons who live at home and whose medical expenses are paid for from the family income are considered to be members of the household. The family income includes the total annual income of all members of the family. Two families living together, pooling their incomes and meeting their expenses as a unit, are considered one family. If the incomes and expenses are entirely separate, each family is studied separately."

Table 1. It is here shown that in income group under \$2000, the average charge per family per year is \$71.48; per individual, \$15.28. As the income grows the cost also grows. That is to be expected. For incomes of \$5,000 and over, the average cost per family is \$311.06, and per individual, \$76.86. Comment: You cannot run an automobile, not even a cheap one for \$71.48, nor a good one which you expect an income of \$5000 and over would operate, for \$311.06 per year. Apparently the outrageous cost of medical care is not so appalling as some authors would make us believe.

Table 2. It is here shown that in the income group under \$2000 consisting of 1,788

TABLE 2

PERCENTAGE DISTRIBUTION OF FAMILIES IN DIFFERENT INCOME GROUPS ACCORDING TO CHARGES FOR MEDICAL CARE PER FAMILY FOR A TWELVE MONTHS' PERIOD

4,560 Families, During 1928-30

Income Group	Per Cent of Families Whose Charges Were in the Specified Ranges									Number of Families
	Under \$25	\$25-\$49	\$50-\$99	\$100-\$249	\$250-\$499	\$500-\$999	\$1,000-\$2,499	\$2,500 and over	Total	
Under \$2,000	40.2	19.8	20.9	13.8	4.1	1.0	0.2	0	100.0	1,788
\$2,000 to \$3,000	26.7	18.9	23.1	22.2	6.2	2.7	0.2	0	100.0	1,372
\$3,000 to \$5,000	22.1	13.3	20.5	28.4	10.5	4.4	0.8	0	100.0	723
\$5,000 and over	11.1	10.6	14.6	28.0	17.3	11.4	6.4	0.6	100.0	677

families, that 40.2 per cent spent under \$25 per year and that 80.9 per cent spent under \$100. In the income group \$5000 and over, 11.1 per cent spent under \$25 and 64.3 per cent spent under \$250. Apparently the claim that the cost of medical care is outrageous is not verified. You cannot run a car nor buy a first class fur coat for an equal amount.

These tables show that it is from the small percentages that ammunition is gathered to justify the fanciful claims of the extravagance of medical care. It would be interesting to know what these same families paid for autos, fur coats, and interest and on principal, over and above a reasonable rent on homes during the same period. It would also be interesting to know, in the higher amounts, \$250 to \$999, how much remained unpaid one year after it was due. In the instance: income group \$5000 and over, where 0.6 per cent paid \$2500 or more, four families were unfortunate enough to have a most serious illness, maybe an auto accident, but that is no reason for including the profession among the pirates when 64.3 per cent paid less than \$250.

Table 3 is especially illuminating. It shows the percentage of families in the four groups paying definite sums or under for annual care. Thus:

Income Group Under \$2000

Eighty-one per cent of families paid under \$100, 5 per cent of gross income; 5 per cent paid over \$250, 12½ per cent of gross income.

Income Group \$2000 to \$3000

Sixty-nine per cent of families paid under \$100, 3½ per cent of income; 9 per cent paid over \$250, 8 per cent of income.

Income Group \$3000 to \$5000

Fifty-six per cent of families paid under \$100, 2 per cent of income; 16 per cent paid over \$250, 5 per cent of income.

Income Group \$5000 and Over

Thirty-six per cent of families paid under \$100, 2 per cent of income; 36 per cent paid over \$250, 5 per cent of income.

It would be interesting to know for what definite illness these sums were spent. We should distinguish between an illness in which life is threatened or might be and those wherein it is not, yet may need treatment, such as anatomical asymmetries needing correction for cosmetic reasons which are usually expensive.

In view of the inclusion in the report of free treatment by practitioners, hospitals and clinics, it would be interesting to know by how much, if these were deducted, the final sums in the various groups would be reduced. It should be noted that these statistics were gathered during the peak boom years, 1928-'29-'30. If gathered during 1931-'32 much lower amounts would be shown more nearly approximating several normal years' averages.

From this statistical study we must conclude that the claims that the costs of medical care are extravagant and outrageous are not true. And we must also conclude from personal experiences and observation that it is the costs of pleasant luxuries in competition with medical care for pocket book preference that are the real extravagances.

We hear a great deal about the cost of getting well and but very little about the

TABLE 3

PERCENTAGES OF TOTAL CHARGES COMPARED WITH PERCENTAGES OF FAMILIES IN SPECIFIED GROUPS ACCORDING TO YEARLY CHARGES FOR MEDICAL CARE

4,560 Families, During 1928-30

Charges per Family per Annum	Percentage of Total for Specified Income Groups*							
	Income Under \$2,000		Income \$2,000 to \$3,000		Income \$3,000 to \$5,000		Income \$5,000 and over	
	Per cent of Families	Per cent of Charges	Per cent of Families	Per cent of Charges	Per cent of Families	Per cent of Charges	Per cent of Families	Per cent of Charges
Under \$100	81	36	69	25	56	15	36	5
\$100 to \$250	14	31	22	34	28	32	28	14
\$250 and Over	5	33	9	41	16	53	36	81
All Charges	100	100	100	100	100	100	100	100

*The percentages of charges are not calculated from actual totals, but are computed on the basis of figures presented in Table 2. The midpoints of the classes of charges were multiplied by the number of families in the respective classes. However, where there were less than ten families in a class, actual figures were used.

cost of a funeral. Funerals are expensive. "The burial industry is unique. It is probably the only industry in which the demand is fixed by natural causes. No amount of advertising or sales effort can increase the demand¹⁰." From 1900 to 1920 there was an increase of 51 per cent in the number of undertakers and 2.3 per cent in the number of deaths. This naturally increased the funeral costs. If you are buried from a busy shop, the average cost is \$219.00, but if from one less busy it will cost \$311.00¹⁰. The inconsistency of complaint about the cost of getting well and the complacency about the cost of final distribution is probably due to the fact that there is no satisfaction quarreling with conditions and death.

"The annual bill for medicines in the United States is approximately \$715,000,000. This is nearly as large as the amount spent annually for physicians or for hospitals¹¹." It is divided as follows: \$525,000,000 for self-medication, of which \$165,000,000 is for home remedies which at large are approved by the physician and \$360,000,000 for patent medicines. \$190,000,000 is for prescriptions. Some of this is our fault. We have introduced numerous remedies to the public, for the benefit of manufacturers, which they now prescribe for themselves—*aspirin* for instance. The public is apparently content and satisfied with their own knowledge and medical skill, and that is why we hear no protests. That they don't get their money's worth is not even debatable.

We are all familiar with the items of hospital costs which together with those incident to convalescence, are frequently a major lien on medium incomes. They are usually unexpected, always unwelcome, and seldom budgeted. We cannot expect people to budget a cost that may never happen. When they do occur they create a disturbance in the already allocated income necessitating personal sacrifices. If it were possible to confine the costs to the necessities warranted by the illness, there would be less complaint. Patients under the stress of illness or the necessity to maintain appearances frequently insist upon unnecessary

and expensive service or environments, thus increasing the cost. Efforts of the physician to keep costs within the income are sometimes resented.

A large hospital bill commonly means a reduction or indefinite postponement of the physician's remuneration. As yet no one has found a way to reduce the cost except by reducing the accommodations, increasing the per cent of occupancy, or resorting to the various forms of hospital insurance. In Dallas⁶, the Baylor and the Methodist Hospitals have contracted with groups of persons, but not with individuals, to furnish hospital care for 21 days once in any year, for fifty cents per month per person. The service includes all of the usual care except x-rays, special prescriptions, serums, doctors, and nurses' fees. Contagious, mental and tuberculosis cases are not included. The groups consist of teachers, city, bank, department store, insurance, newspaper, wholesale house employees, and others. The Methodist Hospital works with an organization known as the National Hospitalization System, which accepts individuals, professional and business men as well as groups. Four thousand members were enrolled between January, 1931, and March, 1932. Financially it is a benefit to the hospitals; the average receipts per patient day were \$6.60 in one and \$7.60 in the other. Ten per cent of the members used the service for an average of nine days each. Obviously it was a benefit to the patient⁶.

Most hospitals have fixed charges, interest for instance, and an average would be \$1.46 per day per bed¹². These do not vary much and form an appreciable portion of hospital charges. Increased occupancy is recommended to reduce costs¹², but until such a time as demand and capacity are more evenly adjusted, hospital costs for the uninsured cannot decline.

In 1928, in the United States the various divisions of government operated 567,434 hospital beds; non-profit associations a total of 247,970 beds, and proprietary associations, 77,530 beds. The total is 892,932 beds. The capital investment was: government, \$1,416,540,000; non-profit, \$1,404,-

415,000; proprietary, \$269,168,000; total, \$3,090,123,000¹².

CAPITAL INVESTMENT IN HOSPITALS, PUBLICATION NO. 7

The Committee on the Costs of Medical Care

SUMMARY AND CONCLUSION

Capital investment in the 7,000 hospitals in the United States exceeds three billion dollars, a greater investment than that in many important manufacturing industries.

The average investment-per-hospital is \$425,000, an amount usually too great to be provided by individuals or small groups.

Hospitalization requires a capital investment of approximately \$5,000 for every patient under treatment for acute disease or conditions.

Most hospitals, 4,538, are for "general" medical and surgical care. They represent 41 per cent of the bed capacity, 60 per cent of the capital investment, and an average investment-per-bed of \$5,000.

Governmental hospitals represent 95 per cent of the capital devoted to the care of persons afflicted with mental disease and 75 per cent of that invested in tuberculosis hospitals.

Investment-per-capita in "general and special" hospitals (other than Federal) is highest, \$25, in the North and Middle Atlantic states, and lowest, \$6, in the South and South Atlantic states.

Existing endowment capital, 437 millions (mainly concentrated in the few older hospitals in metropolitan areas), if redistributed among all hospitals in the United States would provide but \$0.08 per patient-day toward operating costs.

The annual capital expenditures approximate \$200,000,000. Much of this total is directed towards replacing and improving hospital facilities rather than expanding bed capacity.

Increased utilization of facilities is one of the major demands of hospital economy and efficiency.

We are all familiar with the conditions of the nursing profession. Over-production, diminishing demand, cost of service and unemployment prevail. Fortunately matrimony still favors them. To me the answer appears to be in reducing the fee to an amount where more people can afford to employ a nurse; lengthen the hours to the former 20, thus permitting more days of employment, and await a return of prosperity to resume present charges. Most other salaries have been cut and most other industries have reduced prices.

Group Medicine¹³ pays. "The average net income of 301 doctors in 27 private group clinics was \$9,747 in 1929." No doubt much of this was due to better business methods of the managers of the clinics such as credit ratings and collection methods which resemble those of other business enterprises. In addition the manager need not be at all impressed by the close personal relationship

of the physician and patient. In a corporation composed of many physicians, I imagine this personal relationship develops with difficulty. Possibly this is a good thing. After all, close friendship and the acceptance of confidence has its obligations.

The report further states "that at least some of the relatively high average net incomes of clinic practitioners result directly from savings in operating expenses." Again, "Clinic managers, almost without exception, say that the medical practice of their respective clinics is increasing in terms both of numbers of patients and of amount of cash income." Again, "It appears, therefore, that private group clinics tend to reduce independent practice more than would an equal number of independent specialists."

"Clinics have in general provided net incomes and working conditions for physicians which make possible the continued development of group practice. The removal of financial and administrative responsibilities from the individual clinic practitioner has made him more completely available for professional service, and has, in some clinics, increased his opportunities for scientific research and development.

The employment of business managers has usually resulted in increased administrative economy and efficiency. The establishment both of fees and of collection policies is based upon financial data obtained through conventional business methods. Inasmuch as the financial status of a clinic patient is usually investigated, group clinics probably perform less 'free service' than would an equal number of independent practitioners doing the same volume of work.

"Private group clinics, through their available equipment and their coordination of medical specialists, are in a position to fulfill the basic requirements of good medical care with economies from which either or both the clinic members and the public may benefit."

The figures quoted were for 1929, a very prosperous year. There must be many groups and clinics owning small equities in hospitals, clinic buildings, and equipment that are finding it most difficult to meet their obligations today. They cannot maintain their organization and reduce their overhead compatible with their diminished income as easily and effectively as the individual practitioner.

For those interested in the relationship of illness and dependency, I would refer them to *Illness and Dependency*, contribution No. 9, issued by The Committee on the Costs of Medical Care. It is stated (1929-30 statistics) that in 80.7 per cent of dependent families, one or more members were suffering from illness.

"From the findings it may be stated that not less than three-quarters of the families under the care of family agencies present one or more health problems, and that they are probably not less than two persons in each family suffering

from some physical disability serious enough to require medical service.

"Few, if any, social workers consider that the money actually paid for medical care is a significant factor in creating the economic conditions found among dependent families. The serious economic costs of illness are the stoppage of income of the wage earners and the incapacity of the home maker to perform her tasks."

I will attempt to evaluate the patient. The deserving poor, as always, are entitled to complete medical care to be paid for by society. The rich can take care of themselves. The great mass of the public constituting the bulk of practice, living in a difficult modern environment, seduced by installment buying and harmful easy credit which only the thrifty can resist and for which the rest are blameless, discontented over the unequal distribution of wealth, willing to delegate their responsibility to some one or some agency who will accept it, are seeking a modification of the cost of medical care.

A great deal of uncertainty surrounds illness. It is unreasonable to expect the patient to voluntarily budget it. Human nature does not work that way. This attitude, whether reasonable or not, makes no difference. It exists. If the profession cannot adapt itself to it nor produce some procedure that will solve the problem, evolution of the idea that medical care is too expensive and must be reduced will reach general fruition and some popular form of State Medicine will develop.

What is State Medicine? Everybody has a different idea. There is but one true State Medicine. That is in Russia. The term applies to all forms of Group Medicine¹. Sir Arthur Newsholme includes in it industrial and lodge medicine, service provided by insurance companies, by government to employees, by public health authorities, trade unions, and similar organizations. He says, "Group medicine (meaning a group of the public, not of doctors) and State Medicine embrace all medical activities which are not the exclusive result of a direct contact between an individual doctor and an individual patient." So it is evident we have had State Medicine for a long time. It is not coming; it is here. Our prob-

lem is its control and direction. It cannot be annihilated.

In the evaluation of the patient, I tried to show that some people cannot, others will not, pay for modern medicine, and that our socialization is impending if we do not solve this problem. This introduces the question of how can the cost be taken from the individual and distributed in small amounts to the many. The answer is by taxation, insurance, or both.

Secretary of the Interior, Dr. Ray Lyman Wilbur, also chairman of The Committee on the Costs of Medical Care (time, March 28, 1932), says, "The major recommendation (of the Committee on the Costs of Medical Care) will be: Communities, cities, counties, or states, but not the nation, should help pay the medical bills of all the citizens by means of taxes."

"If we organize our talent for producing medical services economically and efficiently, we shall undoubtedly find the cost is not too great for our present society. For inadequate medical services, produced with all the wastes inherent in the individualized practice, we now pay about \$30 per capita annually. With organized coordinated effort we should be able to provide ample medical service of good quality to all the people and with proper remuneration to the professional personnel, for costs of somewhere between \$20 and \$50 per capita per year."

Continuing, his interviewer says, "If this program does not go, then Dr. Wilbur's investigators believe insurance companies will be obliged to provide health insurance."

Dr. Wilbur's plan of taxation medicine is already operating in an incomplete way and only for our poorer classes. That it should be increased to a complete service for them is discussed later on in this paper. The intricacies of administration even for a limited number of people will be difficult enough, to say nothing about the stupendous task of such a service for the whole nation.

In my most fanciful thinking, I cannot conceive the American public delegating to an extravagant government, which most of us regretfully acknowledge we have, the health of the whole nation. I cannot imagine the people being willing to pay the bill including the politicians' perquisites, and I cannot visualize an economically efficient medical service, referred to by Dr. Wilbur, directed by our political incumbents at the present time or the near future.

His second alternative, insurance, as the most logical method of eventually correcting present unsatisfactory conditions, pre-

sents a question requiring investigation, thought, and much consideration by the profession before formulating an opinion. I will not advocate it nor reject it, but emanating from such an important source, it must be considered.

Two plans will be presented: (a) Compulsory, required by law for those individuals of small earnings. (b) Voluntary. This latter type is now offered the public by insurance companies, mutual aid societies, lodges, industrial groups, etc. Of compulsory insurance, two methods, the German and the English, are outstanding.

One reads about a great deal of dissatisfaction among German physicians with the administration of their plan, but not with the idea of insurance. There appears to be a continuous conflict over the allocation of insurance funds and the German physician seems to be getting the worst of it. The operation of the English method is more satisfactory. The British Medical Association has devised a plan of insurance adaptable to the whole nation¹⁴. Evidently they are satisfied with both the method and administration. To many American physicians the idea of compulsory insurance is anathema, but we must consider affairs as they are and anticipate the future.

"The idea of sharing together common risks is as old as mankind¹⁵." Insurance reduces these risks to an exact science. Almost every nation in the world has some plan. They vary greatly with national necessity. It seems to be the answer for unsatisfactory conditions in private practice among the poorer classes. Whether it will ever become an issue in the United States remains to be seen. If our poor continue to increase, some plan of national relief will have to be devised and insurance will be considered. In view of its adoption by most nations it is reasonable to conclude that sooner or later we also will accept it. I am impressed with the fact that nowhere have I read of any considerable group of physicians voicing the desire to return to the practice as it was before the advent of health insurance. This is a potent argument that insurance has been a benefit and not a harm. If there is a better method than

insurance, or insurance and taxation, to distribute the costs of illness, it will be most welcome. I have had occasion to confer with several doctors who do a good deal of compensation insurance work and find they are satisfied with it. If insurance practice works satisfactorily for accidents, it may be equally so for illness.

The English method, with additions to make the service complete for those people who cannot provide medical care for themselves, seems best adapted for our problem. The English National Health Insurance Act was designed for the doctor, "to give such service as can properly be undertaken by general practitioners of ordinary competence and skill¹⁶." A synopsis of the essential provisions of the Act pertaining to the physician was prepared for Dean Rees of the University of Colorado by an English insurance physician and is as follows: (The term specialist refers to service rendered by others than the general practitioner.)

INSURANCE ACT OF GREAT BRITAIN

First. All persons working for wages whose income does not exceed \$1250 per annum must be insured.

Second. The insurance given them when ill.

(a) Sickness benefit varying from \$3 to \$5 per week.

(b) Maternity benefit of \$10. This being payable to the wife of a male insured person, or the female insured herself.

(c) Medical attendants for all conditions except the services of a specialist and midwifery.

Third. Medical practitioners on the register of the General Medical Council are entitled to act as insurance doctors under the Act. The doctor and the patient have each the right of selection or of refusal, and the doctor who accepts an insured person as his patient receives \$2.50 per annum in respect of his responsibility for attendance on that patient whether he attends him or not. He is entitled to receive on his panel 2,000 patients. The doctors in partnership may receive 2,000 patients each. The doctor or patient may respectfully sever his connections with each other on three months' notice. While the doctor's responsibility is to his patient, he also is answerable to the "Insurance Committee." These committees are made up in each city or county for the purpose of administering medical benefit. Complaints against the doctor are dealt with by a committee composed jointly of medical and lay persons from the "Insurance Committee." The Act was started with great opposition in 1912, but despite the interruption of the war during the period of 1914-1918, the Act has proved a great success both financially to the doctor and to the insured person.

The insured population receives skilled medical attention and receives also all medicines without further expense. The insurance doctor is entitled to engage in such private practice and midwifery practices as comes his way, so that a doctor in

general practice may readily make a substantial income, and in the case of insurance work he has no bad debts, as he receives his salary by quarterly check. There is great security for a doctor retaining his practice, but at the same time it is a little more difficult for a young doctor to build up a practice *de novo* quickly. If he buys the practice of a doctor who is retiring he will generally manage to retain it almost in its entirety. The usual selling of a practice is from one to one and one-half of his two years purchase, that is to say, a practice of \$5,000 per annum would sell from a sum of \$5,000 to \$10,000.

Dr. Alfred Cox, Medical Secretary, British Medical Association, expresses the opinion that national health insurance has increased the physician's income, has benefited his morale because of certainty of payment and necessity of professional cooperation; that its effect on public health has been good because the physician sees his patient early; that the insurance physician would not change back to the type of practice in vogue before insurance was introduced.

He says, "If you have a considerable section of your population that cannot get the medical attention they need without resort to medical charity (either the organized kind known as medical charity or the unorganized kind known as not paying the doctor) the State ought to organize some provision for them and the medical profession should help¹⁶.

"In 1921, 14,000,000 persons were insured in England, averaging less than 1000 to each insurance physician. In 1930, 52 per cent of all total registered doctors in England and Wales were engaged in insurance practice. The average payments to each were about \$2300¹⁷."

This amount secured from one source alone, namely, insurance practice, lacks only \$500 per year of the average net income of \$2800 secured from all sources in this country.

Health is not only a matter of concern to the individual but also to his neighbor and the State, e. g. in infectious and contagious disease; to employers, in obtaining less interrupted service; to his country in the interest of government income, i. e., taxation; and government economy, i. e., expenditure for dependency, the mentally afflicted, and tuberculous. This essential interest of others is justification for compulsory insurance.

A plan of compulsory insurance which is not advocated for adoption, but is presented with the idea of exciting thought and consideration, embodying the essentials of the English method which seems to be the best, could be set up about as follows:

All single persons whose income from all

sources does not exceed \$520 a year, married persons without children whose combined income does not exceed \$780 per year, to which income limit shall be added \$50 per year for each child or non-producing dependent, should be insured by the State. Funds to provide the benefits of such insurance to be obtained jointly from the insured, the employer, and the State in the amount of \$5.00 per year per insured person. The head of a family and the State, each to contribute one-half the full amount for each child or totally dependent in the family.

In instances of total unemployment or dependency with no recourse to a head of a family, the state to furnish the full amount.

Funds thus collected to be distributed to physicians willing to render the usual medical service for ordinary illness exclusive of surgery, consultations or specialties, at the rate of \$5.00 per year per insured person. In addition, monies collected by general taxation for the purchase of drugs, hospitalization, consultations, operations, home nursing, etc., from institutions, physicians, and nurses willing to render service for the fees prescribed in the Legislative Act creating such benefits.

Adequate medical care for a sizable portion of illnesses requires measures and institutions which the individual physician cannot provide.

"It is more essential to provide hospital care, consultants, specialists and ancillary diagnostic facilities than the ordinary services of a physician, because herein lie the maximum costs of illness for the individual¹⁸."

I have no way of estimating the cost. The income and indemnity figures may be too low or too high. "Health is worth whatever expenditure is efficiently incurred in its maintenance or to secure its return¹⁹." Cost must be based on a complete and efficient service and therefore will not be small. The lack of continuous employment, migration, our foreign population, depressed industries, etc., may cause complications in administration. I gather it would apply to twenty million persons²⁰.

There are seven or eight million people in the United States living in poverty. "Their incomes do not supply the necessary

food, clothing and other requisites and they must have help from charity to exist". There are twelve million who have a bare subsistence. "Any emergency such as unemployment, sickness, accident, death of wage earner will drive them down to poverty level". These two groups make twenty million who must depend on charity part of the time. It is for this population that compulsory insurance is devised. The next group, twenty million people: "Their income with wise spending will provide everything essential for independent living. They can pay for medical and dental service if illnesses are not too long". They cannot own and operate a car unless they cut on other things. A large portion of semi- and unskilled wage earners and farmers are in this group.

Then comes a group of thirty million. They are skilled earners, successful farmers, foremen, clerks, small business men. They have radios, vacuum cleaners, cars, telephones, and their children are high school educated. Many possess savings.

Next group consists of twenty million living in comfort. They are skilled earners, small business men, teachers, less successful lawyers and doctors. Next group includes fifteen million moderately well-to-do; then ten million well-to-do; finally two million rich.

The major advantages are: (a) It will give a complete medical service to a class of people unable to furnish it for themselves; (b) it will be a good public health measure favoring an early consultation with the physician; (c) the preventive values of curative medicine would be more certainly assured; (d) the physician would receive compensation for service to a class of patients he now serves largely for nothing.

It is not a civic duty of the physician to care for this increasing class gratuitously and at his own expense. That he does so is greatly to his credit and which because it is expected of him, but little appreciation is given by his community. Because society has not met its obligation in this situation, the physician has carried society's responsibility as a humane and moral obligation of

his own, it is his voluntary self-imposed contribution to our social structure, and not a duty enjoined by moral law, except, when society, to which it is a previous obligation, fails. The responsibility of providing medical service for those people who cannot do so for themselves is a civic and social but not a professional one.

Voluntary Insurance: What should be done for the individual of medium income who finds the cost of a serious illness most difficult to pay? This cost should be distributed among many others like him, and voluntary insurance is a method of distribution. Paternalism has not yet developed to the stage where society will assume his obligation and pay it.

Our per capita cost for medical care is \$25 to \$30 per year⁶. These costs are not equally distributed nor restricted to those able to pay them. "Only a fraction of any group of the population is afflicted with severe illness during the year. But on some persons the financial burden falls heavily. The total costs of medical care may be predicted and estimated in advance for a group of people, but not for an individual⁶."

Group payment of small assessments will assure group members medical care at a cost which they individually can pay. Insurance is the instrument through which groups may operate and receive the benefits of group action. We are familiar with insurance policies and agreements of sick benefit clubs, lodges, etc., now procurable. They are, however, incomplete and not well distributed.

The plans discussed under industrial medicine are far more efficient and inclusive, but restricted. What is needed is a plan of insurance more universal in its adaptation and availability. "Sickness insurance is a device by which people pay for their own medical care, is a plan by which self-supporting people continue to remain self-supporting. It is not a means of dispensing charity. It is a means of avoiding charity¹⁰."

In talking with an insurance company executive he disfavored such a plan because of the difficulty of selling any kind of voluntary insurance. He claims the public will

not buy it. Even life insurance is difficult to sell, though all realize that death is inevitable. This experience has great force but is not unsurmountable.

Any person having had to meet illness costs under discussion, would be a likely purchaser. Others who have enjoyed indemnities from an insurance policy would continue to purchase. If voluntary insurance offers a real relief, especially if it releases a fair portion of income for pleasant spending, it can be sold. The growth of medical care by group purchase among employees in industry, is certainly an indicator of the demand which exists for voluntary insurance. A practical efficient satisfaction of this demand is what is needed.

Many industries finance the sale of their own goods—General Motors, for instance. It would be to the great advantage of the industry of medicine to finance the purchase of its service. Therefore, the industry collectively, through the A.M.A., might underwrite health insurance.

If insurance will answer the problem of medium incomes, some company will write it. Why not the A. M. A.? If the A. M. A. does not, it will be written by companies whose interest will be corporate profit. If a corporation can purchase the brains and experience necessary to conduct such business, why not the A. M. A.? If original selling costs form a good portion of its overhead, like they do in life insurance, the A. M. A., because of its organization could minimize them considerably and thus reduce the premium to the purchaser. One hundred thousand physicians to whom it would be an advantage could popularize it. If a corporation wrote the insurance, the indemnity would probably be paid to the insured as it is now done and the physician in many instances never receive compensation, as now happens. But if the A. M. A. wrote the insurance, the indemnity could be paid, not to the insured, but to the doctor, hospital, nurse, etc., directly. Which, after all, is a matter of vital importance. If the A. M. A. should fear that such an undertaking is too foreign to fit into the purpose of its organization and failure would attend its ef-

forts, it might experiment with it a few years and write health insurance for its own members. Then, if successful, it could offer insurance to the public. By means of insurance written by the A. M. A., the personnel of those engaged in the healing art could be greatly controlled. That the A. M. A. might become a carrier of voluntary health insurance is predicated on the success of corporations experienced in financing the sale of their own goods.

The plan would work out about as follows: Mr. A. would purchase annually a contract, providing that the company would pay the balance of cost of an illness in his family, over and above the stated amount which Mr. A would first personally assume. Or Mr. A would purchase an amount of indemnity, stated in dollars, to be applied on the cost of illness after Mr. A had first personally assumed a stated amount. Or Mr. A would purchase a contract in which the company would assume all expense of an illness in his family.

The remedial measures discussed have in mind an organized society paying the physician, as its instrument, through which it meets its social obligations of a medical nature, and through voluntary insurance, making more sure the physician's payment by the individual. They avoid his standardization and permit as much initiation as he now enjoys. He need not become a "robot," a "tonsil mechanic" or "inspector of gonorrhea¹⁸⁷", as has been credited to be an outcome of a type of State Medicine.

Any method of medical care for the low income classes, engaging the profession as a whole, must have the profession's endorsement and cooperation to succeed. Because of this, the profession, if it so desires, can direct its choice and development.

It is realized that the practical consummation of an insurance plan or any other that might be devised will take years. However, the profession is being challenged now to produce a cure for its economic ills. If, because of indifference, self-adjustment is relied upon, a great risk will be assumed, that the public will attempt a plan of relief of its own, . . . contrary to medical interests.

ECONOMIC DO'S AND DON'T'S FOR THE MEDICAL SOCIETY*

HARVEY T. SETHMAN
DENVER

At the outset may I emphasize that statements in this paper do not represent policies of your Executive Secretary as an officer or employee of the Medical Society, but rather his personal observations as an individual, obtained through the opportunities afforded by his position to gather the opinions and experiences of real students of medical economics. The paper is supplemental to that by Dr. C. E. Cooper; I fear it will be an anticlimax, for he has presented a scholarly summary of the whole situation. I shall attempt to suggest a few ideas for state, county, and individual application to immediate present conditions. Few of them are original; some may be impolitic or Utopian; most have been tried with more or less success in other states. They are presented in outline only because of limited time.

The marshalling of facts is the first logical step in attack on any major problem. Our Society needs exact information about existing conditions in our own peculiar state before going on record for or against any proposal for a new system of medical practice designed as a general cure for the profession's economic ills or the high cost of sickness.

Our state Committee on Medical Economics might well direct an accurate economic survey of medical practice in Colorado, along lines of one recently completed by the State Medical Society of Wisconsin. It could learn the real economic situation of our doctors, the real situation in regard to charity work and its monetary value. Broad studies by the national Committee on the Costs of Medical Care do not necessarily apply to our own state; they teach us little about purely local problems. The suggested study will take work, but will be worth the effort. In the words of Dr. Olin West, "Leadership can hardly develop and be effective unless the intelligent units of the rank and file are properly informed, and they will be informed

only as they seek information and expend some effort of their own to get it."

With complete information about our own peculiarly local conditions, we will be not only in a better position to advocate that which seems proper, but in a splendid position to oppose ill-conceived or untimely suggestions.

If the day of health insurance is coming or is here, why should the profession not control it, and with insurance-trained employees, operate it? I suggest that a strong county society be first made the proving ground. In Denver now there is a "mutual benefit association," open to the general public, operated as a going concern by laymen, for lay profit. If the low-income stratum of society demands a medical service at a dollar or two a month per person or per family, the medical profession must provide it, or someone else will.

If such plans must come, it would appear feasible to organize what might be called a "Medical Society Health Association," with membership open only to those of limited income, with dues payable monthly in advance, with a small office and twenty-four-hour telephone service—all directed by a part-time doctor. Calls for physicians by association members would have to go through the office. Members could have the physician of their choice so long as he is a member of the Medical Society, thus retaining the family doctor relationship lost in many insurance plans. Those without choice could be supplied from a rotation list, made up upon application from physicians willing to accept calls at less than standard fees. With dues paid in advance, there would be no collection problem, and a class now being pauperized by charity might regain self-respect. Special medical and surgical services would require extra pay above the monthly dues, also payable in advance or by definite financial arrangement with the doctor rendering the service.

If this were done, similar lay-controlled plans would go out of business because they

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 8, 1932.

would have to charge higher fees, if for no other reason. Similar plans to provide hospital care exclusive of medical fees are operating successfully in several cities and are already under way in Denver.

It has been proved that group medicine pays. I believe one of Dr. C. E. Cooper's plans is applicable to some of our cities. Form a group of physicians, financially independent of each other, but grouped for consultation work and for dealing collectively. As a group, contract for hospitalization, on terms similar to those for corporation business, bills to be guaranteed by the physician entering the patient. Arrange a fee schedule between group members for consultation and special services which can be low because of certainty of payment. Charges would be guaranteed by the referring physician. Employ a business manager and exact payment in advance for these special services. Members of such a group would not be limited to practice within the group.

Each county society should draw its definition of what constitutes a charity patient. From these, draw a state definition if possible, and let every doctor know about it. Well considered general publicity of the results might shame many non-charity individuals from seeking medical charity.

I suggest that the Society enunciate as principles:

First: That the care of the indigent is a community obligation;

Second: That the physician is entitled to the same consideration as the grocer or the Public Service Company in compensation for materials and services supplied to the indigent;

Third: That the charitable work of the medical profession will be continued by physicians as individuals to those patients who as individuals are laboring, under handicaps, to maintain themselves above the pauper class;

Fourth: That the Society disapproves any system which provides a single practitioner or group to care for the indigents of a community, with the few necessary exceptions granted in the cases of certain institutions.

The city, county, state, and all philanthropic bodies can and will pay for what they want, just so soon as they learn they can no longer get it for nothing. The Hippocratic Oath was written long before anyone dreamed of the modern county hospital or the Community Chest. It is not unethical for a doctor to turn away a suspected dead-beat. Let the patient pay cash, let him prove his credit is good, or let him clearly show his right to beg medical alms. The public respects sound business methods and will respect the doctor the more if he adopts them. Our State Economics Committee might work out for our individual physicians a simple system of cash discounts, easy to use and offensive to no patient.

Individually and collectively, avoid like the plague unknown or newly-formed collection agencies and finance companies. Use trained collection men for collection service. Doctors are not trained collectors, neither are county medical societies. They usually fail as such. As you expect a fair fee for your medical service, expect to pay a fair fee for collection service. I suggest that each county society contract with a long-established collection firm in its community, giving that firm the right within limitations to use the name of the medical society. Consider having the firm work on a cost-plus basis instead of straight commission. Urge, and, if necessary, find means to demand co-operation from the members. I believe it unwise to attempt this on a state-wide scale, and unwise to incorporate the state society into a huge collection and credit concern as has been recently suggested. I believe it impractical on the one hand, impolitic on the other. We have to fight the false accusation of "medical trust" often enough without tempting ourselves to become one.

We decry the use of free medical services by those who can pay, and many are the complaints heard against such free services as those offered by the State Board of Health Laboratory and by municipal and other agencies. Yet, for instance, some physicians send all their Wassermann's to the state laboratory. County societies might consider this officially, for encouragement of

the use of free services by the non-indigent is opposed to the best interests alike of the profession, the taxpayer, and the general public.

The words "public health" are too indiscriminately used, so that the layman considers as public health work many things which are not. Activities that started in public health agencies have gone wide of their mark and now we have public health, medical relief, and police work intermixed.

The Society should insist that public health be divorced from medical relief, be separated from police work. Emergency care of accident victims is a police duty; it is not public health. General medical and surgical care of the indigent is medical relief; it is not public health. I believe the divorce and separation can be obtained. A line can be drawn between true public health activities and those outgrowths which are in reality paternalism under a public health label. Our Society should lead the way.

The Society should insist, and go before the newspapers and the laity with its insistence, that state and local health departments recognize public education as their first and greatest duty. Doctors need not fear the works of true public health. Health education creates work and income for the doctor. Most preventive activities, even including the work of school physicians, do likewise. They are case finders. If a few cases are misdirected through faulty administration, the answer to that problem is in better control of these activities by county medical societies.

The hospital and the nurse are invaluable aids to the doctor, but both are supplementary. Our Society should guide both the hospital and nursing associations.

If hospitals expect our support, they should admit only members of the medical society and those declared by the society's censors to be eligible to membership. Standardized hospitals should not be open to the man who is not sufficiently interested in keeping abreast of medical progress to belong to his county medical society. He should not benefit by the facilities erected for the use of competent physicians and whose use in the hands of the unskilled will serve only to give

the patient a false sense of security and give the profession a bad name. This principle can be applied without depriving the occasional worthy non-member of proper hospital connections.

If nurses expect our support, they should aid physicians, not ape them. The medical profession's former neglect of personal service in its striving for scientific perfection was responsible for the creation of the medical cults. Many believe the nursing profession is headed the same way, attempting to become little short of a new medical profession, to the exclusion of personal service. Our Society should guide the nursing profession away from this danger.

In my opinion, no one of our twenty-five local societies is properly interesting itself in the economic problems of the individual doctor. It should devote part of each meeting, or perhaps one entire meeting out of each three, to frank economic discussion; if nothing else, to the exchange of the names of the community's dead-beats. Each county society should study the hospital bed capacity and bed occupancy in its district and oppose the construction of any more hospital beds, public or private, except where clear necessity is obvious.

Each county society should study its own automobile accident situation and then, with facts in our possession, we should all go before the legislature with an automobile accident lien bill. Should politics block such a bill, may I point out that the Indiana Society worked out an agreement with a majority of the leading insurance companies in that state whereby the physician is assured of at least part of his fee at the time the insurance company settles with the patient. Our own state Economics Committee; armed with facts, could do likewise. Our Committee might also set up a friendly arbitration body to study and advise in every dispute that arises between a doctor and an industrial insurance carrier. This also has worked in other states.

Each county society should frequently survey its district and learn where doctors are needed, ascertaining the approximate income available. Through their own and the

state society officers accurate advice could then be given the physician who needs to change his location.

Hospitals in the larger centers should be urged to admit to their accredited lists those rural physicians living within a reasonable radius, upon association with a local physician to be responsible for emergency calls. This can be worked out without departure from the established procedure of hospitals and their staffs designed to limit their lists to those well qualified in the services in which they desire to enter patients. Many a rural physician thus would have facilities for giving proper hospital care to his patients without depriving himself of the revenue that alone may make it possible for the rural area to enjoy his services.

Many doctors have never seen a simple, business-like bookkeeping system. Our state Committee could work out several sample business systems, bookkeeping plans, credit files; suitable to the various types of individual practice. These could be mimeographed and kept on file in each county secretary's office, or supplied individually to members on request. It is my firm conviction that this comparatively small item would help many a doctor.

Finally, I urge a correlation of the work of certain of our committees, all of which have economic features in their duties. I would suggest a monthly conference of the chairmen of the committees on Medical Economics, Public Policy, Advice to the School of Medicine, Medical Defense, and Cooperation with Allied Professions, presided over by our State President.

I trust the suggestions presented have not appeared pedantic. Such is not my intention; they are purely personal opinions, largely gleaned from other state secretaries whose societies are doing these things. After all, the improvement of medical economics is a matter of mutual protection. Here, as elsewhere, if united, we will stand or fall together, probably stand. Divided we can only fall. We must improve our unity and grow. The biggest "do" in medical economics is to maintain the strongest possible organization,

united and ready to meet any emergency. It is frequently difficult to hold the interest of members in strenuous economic times like the present, and those who waver in their loyalty to the Society might well read a paragraph from the pen of Julius Klein, Assistant Secretary of Commerce of the United States, which I quote in closing:

"I hear some members of business bodies talking these days about the possibility of resigning from their organizations with the object mainly of supposedly saving money. I can think of nothing more dangerously extravagant than that, a wasteful squandering of that invaluable asset of good team work at the very time when collaboration is absolutely vital. When you are out in mid-Atlantic in a storm, do you see anybody shoving off from the big liner in a rowboat by himself to save passage money? Well, hardly! Mass action is imperative and mass assaults can move mountains."

NOTICE!

Special Meeting on Medical Economics

The Medical Society of the City and County of Denver will conduct a special all-day Congress on Medical Economics, Sunday, April 30, with exhaustive discussion of the final report of the Committee on the Costs of Medical Care. All interested members of the State Society are invited.

The American Medical Association has consistently and persistently done everything in its power to prevent the extension of Federal aid for the medical and surgical relief of diseases and injuries of civil life without regard to the ability of the recipient to pay for such services. Why have all of its efforts met with such absolute and complete failure? Because its constituent state associations and component county societies have failed miserably to cooperate with the American Medical Association. Not until every county society realizes and accepts its responsibility can anything be accomplished in any legislative program.—Journal of the Medical Association of Georgia.

SHALL WE LEGISLATE THE MEDICAL SCHOOL AND ITS HOSPITALS INTO OBLIVION?

LEO V. TEPLEY, M.D.
DENVER

Of late all sorts of rumblings and rumors are current about the medical school and its hospitals. These rumors have reached the ears of politicians. Bills aimed at the very existence or at the usefulness of the medical institutions have been introduced in the legislature. A few physicians in good standing are rumored as being active in this movement. Ostensibly this is done for the purpose of saving the taxpayer the sum of three-quarters of a million dollars. In reality there are factors other than the interest of the taxpayer to be considered, even if such a saving could be effected, which is in itself debatable. As these institutions have become an integral part, not only of the educational system of the state, but of its health program, a few remarks, which might to some extent elucidate the problem, are in place.

A few words of the history of the medical school are imperative in order to understand its functions and relation to the profession and state. It became a member of the association of Medical Colleges in 1924. An \$800,000 donation from the Carnegie fund, a \$200,000 donation from the Rockefeller fund, plus a yearly addition of \$50,000 for three consecutive years, and a liberal contribution from Mrs. Verner Z. Reed, placed the school on a firm basis. It began to spread its usefulness to the medical profession and throughout the state. Space does not permit more than the mere mention of the benefits accruing to the Colorado physician and his communities. Since 1925 many members of our fraternity have had the privilege of listening to the words of wisdom and experience of such men as Evans of California, Ivy and Carlson of Chicago, Weisenberg of Paris, Keith of the Mayo Clinic. The Bloodgood clinic will be remembered for years to come by all those who attended it. The Peck clinic was also very valuable to those who attended it. The National Goiter Society carried out its main work in the operating rooms of the Colorado

General Hospital. The Interstate Post Graduate Clinic has been established. The school is carrying on extensive research in allergy, non-union of bone and in the various fields of hormones.

The Psychopathic Hospital has achieved a most enviable record. It ranks among the first six of America's recognized hospitals of its kind. Here, too, only a mere mention of its achievement and contribution will be made. The Colorado doctor has been made "psychiatry minded" since its establishment. This was brought about by educational programs carried out at the various county medical centers by the director and staff of Colorado Psychopathic Hospital. Mental hygiene clinics, child welfare clinics, child guidance clinics were established throughout the state. Physicians, teachers and the more advanced type of jurists began to realize the importance of prevention in the field of abnormal conduct. Malaria, probably our best therapeutic agent in the treatment of tertiary syphilis, was known to but few by reading only, and was not in use in the pre-Psychopathic Hospital days. The same applied to encephalography. Somatic factors, various intoxications, and their relation to the psychoses are being thoroughly studied at the Psychopathic Hospital. The combined lumbar and cisternal puncture is being used with greater frequency in meningitic infections since the establishment of the hospital, although the method was not originated within its walls.

The educational program which is carried on cannot be fully estimated, indeed not in dollars and cents. The battle of experts in certain trials which gave psychiatry a black eye, and by the mechanism of the conditioned reflexes, the whole medical profession has been greatly eliminated. Last, but not least, the Colorado Psychopathic Hospital, more than any other single agency, has justly brought Colorado and its physicians within the visual field of the nation's medical centers. The average physician of Colo-

rado compares well indeed with any in the country, and for this no small amount of credit is due the medical school. An accredited medical school acts as a stimulus to the local physician. It maintains his medical "tone," so to speak. It keeps him alert, informed, and up to date. He is constantly adding to his medical armamentarium, and is thus increasing his efficiency in combating disease. Why, then, bills at the legislature, aiming at the usefulness of the medical school and hospitals? Why are the sponsors of this prospective legislation incognito about it? Why all the agitation? While not attempting to invade the field of mind reading, the reason for the medical unrest can best be explained as being principally due to the following three causes:

1. Economic interference on the part of the Colorado General Hospital with private physicians.
2. Misunderstanding and exaggeration on the part of the private physician of this competitive element.
3. Lack of cooperation between the medical school and the medical profession at large.

On Cause No. 1, the issue is clear cut. Section 3 of S. B. 334 by Senators Girard and W. W. King reads: "Said hospital shall be primarily and principally conducted for the care of legal residents of Colorado, *who are unable financially to secure such care* (italics mine) . . . It shall be the duty of the said county commissioners to *cause a thorough investigation to be made into the financial condition of said persons sought to be treated*. . . then said county commissioners shall enter an order finding such the facts and certifying their approval of said applications." The wording is clear. Under these terms the admission of patients who are financially able to pay is a violation of the law. On this score there is a great deal of dissatisfaction and criticism of the management of the Colorado General Hospital. On the face of these facts Dean M. H. Rees, who is the superintendent of the hospital, is plainly at fault. But—and here comes the rub: Chapter 186, Acts of the 24th General Assembly of the State of Colorado, reads:

"It shall further be the duty of said county commissioners to appoint a physician of said county . . . who shall make personally an examination of the person on whose behalf application for treatment has been filed . . ." It is this further addendum, which makes it possible for non-indigent patients to enter the hospital, and which renders the Dean practically helpless. The county physician and county commissioners say that this patient has been examined financially and physically, and he must go to the Colorado General Hospital. The Board of Regents are authorized to charge him per diem cost, but after he has been admitted, and at times after he has left the hospital, a neighbor or someone else cries, "Dean Rees, halt—this patient is not as poor as he says he is. Throw him out, he is able to employ a private physician and pay for a private hospital." In whatever words we couch the situation, the fact remains that in our indignation that some people are abusing medical charity, we flay the superintendent and command him to close the hospital doors to a sick human being simply because *we* think he is not as poor as he ought to be.

The general feeling that the superintendent could keep out a good many more undeserving patients from the Colorado General Hospital is perhaps justifiable to a certain extent. On the other hand, one must also admit that if any private physicians should be forced to indulge in any personal controversies with county commissioners and county physicians who are in many instances hundreds of miles away from the hospital, they, too, might be inclined to slip occasionally and admit an undeserving patient.

Cause No. 2. Recently one of our conferees claimed in a public letter that the cost per day at the Colorado General Hospital is from \$8.00 to \$10.00; that the closing of the hospital would save the state approximately \$500,000 a year; that over 50 per cent of the patients in the Colorado General Hospital are capable of affording private services. But Dean Rees states that the actual cost per patient is only \$4.80 per day; that the money asked of the taxpayer toward the maintenance of the institution is approximately \$225,000, and that in 1932 only ten

patients paid more than \$3.00 per day. Parenthetically it should be added, however, that even though the number is only ten, it is still too high. These, however, are faults which are not only amenable to treatment, but to complete eradication. To close the institutions because they have admitted undeserving patients is as unjust and illogical as if one were to demand the closing of a bank because one of its tellers was found guilty of embezzlement. In justice to Dean Rees it must be stated that he pledges his utmost cooperation in reducing these evils to the minimum consistent with common humanity and conditions arising when one is faced with a sick human being in immediate need of medical assistance.

Cause No. 3. If the rank and file of the profession benefits from the existence of the medical school, the latter, in turn, it must be remembered, owes something to the physician. A large number of physicians in good standing are resentful that they are unjustly eliminated from participation in things which might be mutually beneficial to them and the medical school. The school is frankly accused of being in politics and playing politics. A considerable number in the profession feel that it maintains a wholly uncalled-for spirit of aloofness. They entertain a taciturn resentment because of lack of a more friendly relation between them and the school.

It must be admitted that we cannot all be generals or departmental heads, or members of a teaching staff; nevertheless a more cordial attitude between the school and the medical profession is possible and would result in the disappearance of all rumblings, not only at this time but in time to come.

The relation of the school and the profession ought to be one of symbiosis instead of anabiosis. All things medical and those pertaining to public health ought to be settled first, last and always by medical men themselves, for it is they who know what is best for public welfare. The medical profession need not fear that it might be accused of jeopardizing the interest of public welfare, because of personal aggrandizement. Woodrow Wilson's words, "too proud to fight," might justly be paraphrased, "too proud to

argue such nonsense." It is to the credit of the rank and file of medical men that whenever there is a conflict between personal gain and the welfare of society, the question of money always takes the second place. Preventive medicine, the robber of a goodly portion of the doctor's income, is the creation of the doctor himself.

Harmony within the medical profession itself is more important at this time than ever before. The cults in association with the selfish, the ill-balanced, the malcontent and the unscrupulous might give organized medicine a blow, the ill effects of which might last for a long time to come.

In the field of zoology and anthropology the survivor in the struggle for existence is not always the fittest, but the one who practices mutual aid and cooperation. Why not apply this principle to the medical school and profession?

If it should be found that the hospital administration indulges in irregular practices, that it is inefficient and a detriment to the state and profession, it should be replaced by a competent and reliable one; but if these charges and accusations are unwarranted, if nothing but a few flaws can be found in its services to the institution, the administration ought to be given due credit for the good it has accomplished and be encouraged in continuing the work. The French saying, "Beware of changing a good thing for a better one," might well apply to the situation.

We need a constructive program which would accomplish the maximum of good for state, profession and school, and not bills filled with cumbersome legal terminology prepared by authors of unknown identity. The organized medical profession, in whose hands is entrusted the responsibility of the welfare of the public, is the one to formulate bills pertaining to public welfare. This ought to be done in the wide open by men most competent along these lines, and under the guidance of the medical society. Such an attitude would command the approval of our legislators instead of dragging them into factional strife and personal differences. Above all it should be remembered: A house divided against itself cannot stand.

THE PRESENCE OF FLUORINE IN THE WATER SUPPLY OF COLORADO AND ITS RELATION TO THE OCCURRENCE OF MOTTLED ENAMEL*

C. H. BOISSEVAIN, M. D.
COLORADO SPRINGS

Mottled enamel is found in many sections of Colorado. In this condition the enamel is paper white and opaque, in contrast with its normal yellowish and translucent appearance. Only a few spots may be present, or the entire tooth may be affected. It is rarely found in the temporary teeth; in the permanent teeth it is present at eruption, never acquired afterwards. As a secondary complication, the mottled teeth may acquire a brown stain, sometimes called the "Colorado brown stain." This is due to an accumulation of pigment, "brownin," between the columns of the deficient enamel. If, as is usually the case, the incisors are affected, this stain causes considerable disfigurement.

It was first mentioned in American literature by Captain J. M. Eager of the U. S. Marine Hospital Service,¹ who in 1902 reported the occurrence near Naples of abnormal teeth, called *Denti di Chiaie*, after Professor Stefano Chiaie, who first described them, or *denti neri* (black teeth), or *denti scritti* (inscribed teeth). In 1910 H. A. Fynn from Denver published a paper describing the defective enamel of children born in Colorado Springs.² The systematic investigation of the cause of mottled enamel begins in 1915 with the work of Frederick S. McKay of Colorado Springs. In a series of publications,³ he showed the widespread geographical distribution of mottled enamel. In the United States it is found in Arizona, Arkansas, California, Colorado, Idaho, Illinois, Kansas, Minnesota, New Mexico, North Dakota, South Dakota, Texas, and Virginia. Outside the United States it has been found in Holland, Italy, Spain, Northern Africa, China, Cape Verde Islands, Bahama Islands, Mexico, and Argentine. It is mostly found in rural regions and small villages; Colorado

Springs is the only town of any size affected.

McKay further showed the connection between mottled enamel and water supply. One of the most striking proofs given by him was the experience of the town of Oakley (Idaho). A pipeline was built there in 1908 to supply the town with drinking water from a warm spring. All children who were less than five years old at that time developed mottled enamel; those who were between five and nine years old have normal incisors but mottled bicuspids, while children who were over nine years old when they first drank the water have normal teeth, except sometimes the third molars. A similar situation was found in Bauxite, Arkansas. Both towns changed the source of their water supply and mottled enamel disappeared. It was thus proved that the water supply was the cause of mottled enamel. At the same time it was shown that the teeth are affected in their formative period only, before eruption; the teeth of adults or of children over nine years old were not affected by the change in water.

It remained to be found which constituent of the water was responsible for the condition. In February, 1931, McClure and Mitchell⁴ published an article showing that the teeth of fluorine fed animals had a dull white color instead of the normal yellow. The fact that small quantities of fluorine in the food affect the teeth had previously been found in 1925 by McCollum, Simmonds, Becker and Bunting.⁵ In June, 1931, Smith, Lanz, and Smith⁶ reported the production of lesions resembling mottled enamel by feeding fluorine to albino rats. H. V. Churchill⁷ in the same year reported finding from 2 to 13.7 parts per million fluorine in water from a number of towns where mottled enamel was endemic. In addition he found small amounts of fluorine (less than one part per million) in the water of several other towns where no mottled enamel has been reported. Curiously enough, no fluorine was found in the wa-

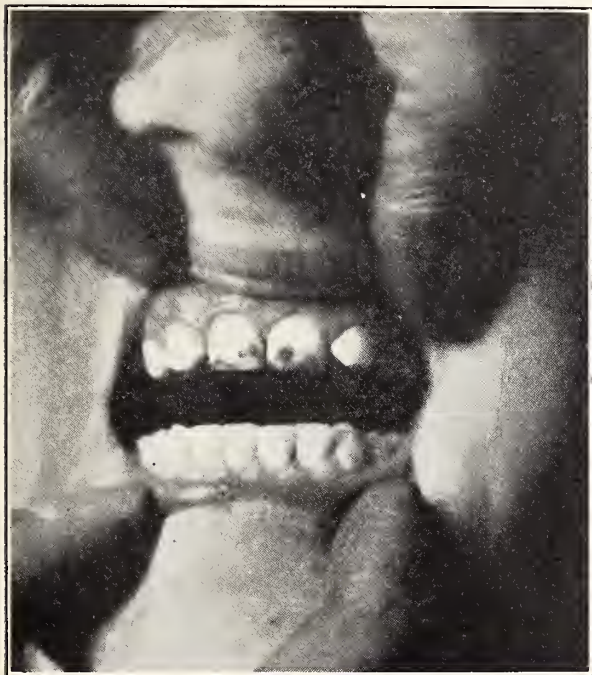
*From the laboratory of the Colorado Foundation for Research in Tuberculosis at Colorado College, Colorado Springs. Read before the November meeting of the Colorado-Wyoming Academy of Science.

ter supply of any city east of the Appalachian mountains. The present author had independently found fluorine in the water supply of several towns in the Pikes Peak region in the spring of 1931. As it seemed that no direct proof was possible that the lesion of the teeth of experimental animals was the same as mottled enamel in human beings, a survey of the amount of fluorine present in the water supply of Colorado was undertaken. If a close correlation could be shown to exist between the quantity of fluor-

ine in the water and the occurrence of mottled enamel, this would give considerable support to the theory that fluorine is the cause of mottled enamel.

Methods

Containers holding 500 c.c. were sent to the water superintendents of 233 incorporated towns in Colorado. My thanks are due to the 169 who returned them with a sample of water. Steiger's titanium sulphate method⁸ was used to determine the amount of fluorine present. Four hundred c.c. are boiled down to 50 in the presence of ammonium carbonate to precipitate aluminum and silicon which interferes with the determination. The solution is then filtered into a 100 c.c. graduate, 20 c.c. of a solution of titanium sulphate in 3 per cent sulphuric acid, containing 0.1 mg. titanium per c.c., and 2 c.c. of 3 per cent hydrogen peroxide are added, and the mixture made up to 100 c.c. The yellow solution is then compared with a set of standards containing known amounts of fluorine. The remaining 100 c.c. are used to determine the amount of sulphates and phosphates present. In no cases were sufficient phosphates found to interfere with the determination, but in a few cases a correction had to be made on account of the presence of sulphates. One gram of sodium sulphate per liter causes the same amount of bleaching of the yellow solution as 0.1 part per million fluorine.

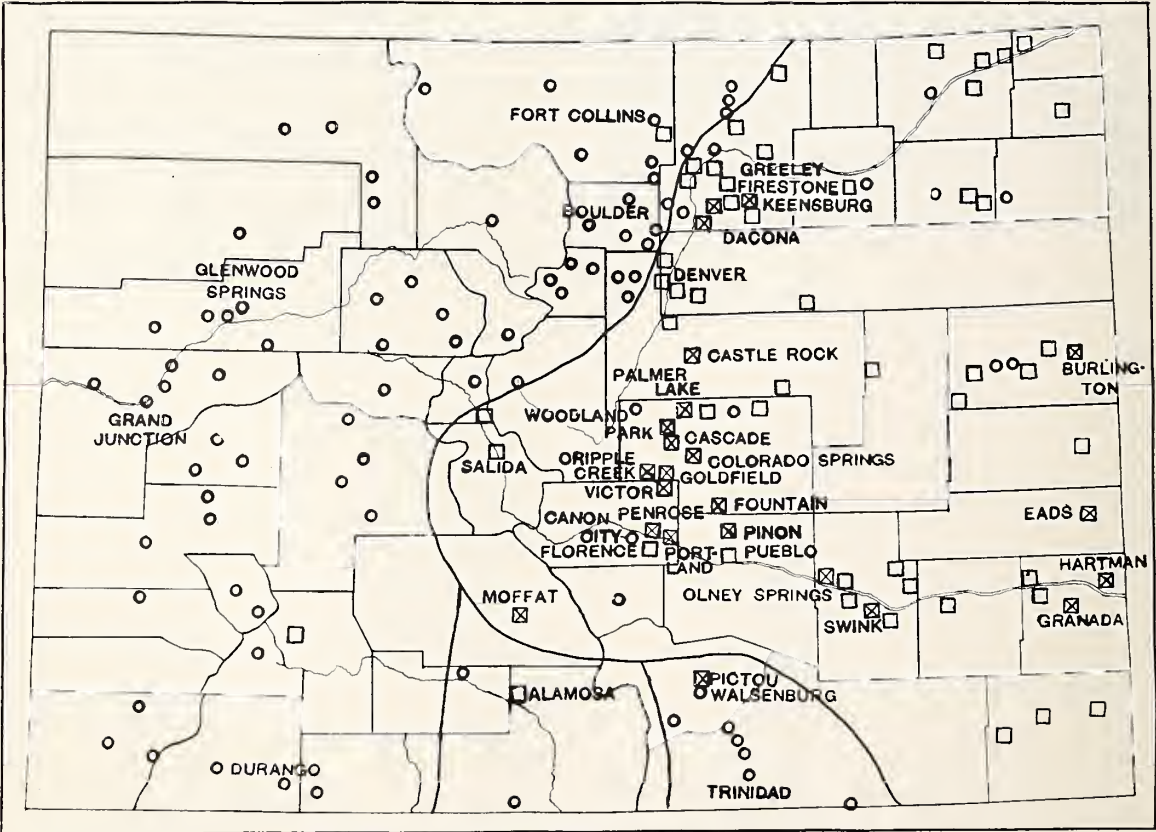


Teeth of 18-Year-Old Girl In Colorado Springs

TABLE 1
Fluorine in Water Supply of Towns in Colorado
(Parts per Million)

Aguilar	none	Cedaredge	none
Akron	none	Central City	none
Alamosa	0.4	Cheraw	0.4
Antonito	none	Cheyenne Wells	0.3
Arvada	0.4	Collbran	0.3
Aspen	none	Colorado Springs:	
Ault	none	Municipal	2.0
Aurora	0.5	Northfield	1.2
Basalt	none	Broadmoor	1.4
Bayfield	none	Stratton Home	4.0
Berthoud	none	Cortez	none
Bethune	0.5	Craig	none
Blackhawk	none	Crawford	none
Boulder	none	Crested Butte	none
Branson	none	Cripple Creek	2.0
Breckenridge	none	Crook	0.3
Brush	none	a Dacona	2.5—2.4
Buena Vista	0.3	DeBeque	none
a Burlington	1.3—1.2	Deertrail	0.5
Canon City	none	Delagua	none
Carbondale	none	Del Norte	none
Cascade	2.0	Delta	none
Castle Rock	1.2	Denver	0.5

b	Divide	none	Hayden	none
	Dolores	none	Holly	0.5
	Durango	none	Holyoke	0.2
a	Eads	2.5—1.0	Hotchkiss	none
	Eagle	none	Hudson	0.2
c	Eastonville	none	Hugo	0.3
	Eaton	0.1	Idaho Springs	none
	Eckley	0.2	Ignacio	none
	Edgewater	0.5	Johnstown	0.1
	Empire	none	a Keenesburg	4.0—4.0
	Erie	none	Kersey	0.6
	Estes Park	none	Kremmling	none
	Eureka	0.2	Lafayette	none
	Fairplay	none	La Junta	0.2
a	Firestone	1.2—1.3	Lamar	0.3
	Flagler	0.3	La Salle	0.5
	Flemming	0.4	Las Animas	0.4
	Florence	0.2	La Veta	none
	Fountain	2.0	Leadville	none
	Fort Collins	none	Limon	0.2
	Fort Lupton	0.5	Littleton	0.5
	Fort Morgan	0.4	Longmont	none
	Fruita	none	Louisville	none
	Georgetown	none	Mancos	none
	Glenwood Springs	none	Manitou	2.4
	Golden	none	Manzanola	0.5
	Goldfield	1.2	Marble	none
a	Granada	1.2—0.8	Mead	none
	Grand Junction	none	Meeker	none
	Grand Valley	none	Milliken	0.8
	Greeley	none	Minturn	none
	Green Mt. Falls	2.0	a Moffat	1.5—2.0
	Grover	0.5	Montrose	none
	Gunnison	none	Monument	0.5
	Gypsum	none	Nederland	none
a	Hartman	1.9—1.5	Newcastle	none
	Hastings	none	Norwood	none



Map Showing Distribution of Fluorine In Colorado

○ Fluorine absent. □ Fluorine present.

× More than 1.0 part per million present

Nucla	none	Silverton	none
Nunn	none	Simla	0.4
Oak Creek	none	Springfield	0.6
Olathe	none	Sterling	none
a Olney Springs	2.0—1.8	Stratton	0.3
Otis	0.2	Sugar City	0.5
Ouray	none	a Swink	1.4—1.0
Ovid	0.2	Timnath	0.1
Palisade	none	Tinidad	none
Palmer Lake	1.0	Victor	1.1
Peetz	0.4	Vona	none
a Penrose	1.2—2.0	Walden	none
Pictou	5.0	Walsenburg	none
Pierce	none	Walsh	0.5
Pinon	d 0.8—2.2e	Westcliffe	none
Platteville	0.5	Westminster	0.4
Portland	2.2—0.4 f	Wiley	0.4
Pritchett	0.4	Windsor	none
Pueblo	0.2	Woodland Park	1.5
Ramah	0.4	Yampa	none
Redcliffe	none	Yuma	0.5
Ridgway	none		
Rifle	none		
Rockvale	0.3		
Rocky Ford	0.4		
Salida	0.6		
Sedgwick	0.2		
Seibert	none		
Silver Plume	none		

Key:

- a Two months interval between two samples.
- b Well.
- c Pump near schoolhouse.
- d. Well.
- e Spring.
- f Two water systems.

Correlation of Fluorine and Mottled Enamel

Of the 169 water supplies analyzed, 80 contained varying amounts of fluorine, and 25 more than one part per million. Fluorine in amounts larger than one part per million occurs in the water supply of all the towns that receive water from the Pikes Peak watershed, namely Colorado Springs, Manitou, Cascade, Green Mountain Falls, Woodland Park, Cripple Creek, Victor, Goldfield, Penrose, Portland, Piñon, and Fountain. The towns Palmer Lake and Castle Rock also belong in this group although their water supply, strictly speaking, is not derived from Pikes Peak but from adjoining parts of the Front Range of the Rocky Mountains. I visited all these towns and found mottled enamel very common in all of them except Portland, where I was not able to find a single case. The water supply in Portland is derived from two different sources; water from the Arkansas river, containing 0.4 p.p.m. fluorine, is piped into the houses. As this water is suspected of having caused intestinal infections, drinking water is delivered to the inhabitants twice a week by truck. This special supply of drinking water contains 2.0 p.p.m. fluorine, but apparently not enough of it is used by the population to affect the teeth.

Another group of communities, where the water contains more than 1 p.p.m. fluorine, is formed by three small towns in the coal field north of Denver: Keenesburg, Dacona, and Firestone. I visited these towns and found typical cases of mottled enamel and brown stain in Keenesburg and Dacona, but none in Firestone. Inquiries brought out the fact that the water supply of Firestone had been changed only the previous year. It will take five years before the effect of the new, fluorine-containing water becomes evident there.

The third group of towns is found in the lower Arkansas valley. The water from Olney Springs, Eads, Hartman, Swink, and Granada contains more than one part per million fluorine. In the first four I observed typical cases of mottled enamel; in Granada I did not have the opportunity to examine any child, as most of the members of the younger set were attending some celebration at a neighboring ranch on the day I was there. It is often very difficult to find children who have lived in one community all their lives and who have principally used water from the municipal water supply. In several cases it was necessary for me to ask the help of the local physician or schoolmaster, which was always generously given.

Finally, fluorine is found in the water sup-

ply of Burlington, near the Kansas line, in Pictou, a small coal mining town near Walsenburg, and in Moffat in the San Luis valley. Mottled enamel occurs in all three towns but it is specially bad in Pictou, where the fluorine content is the highest that has been recorded for this state.

We have seen that wherever fluorine-containing water is drunk, mottled enamel appears. The opposite is also true. No fluorine is found on the Western slope, and, as far as I know, no case of mottled enamel has ever been observed there. The fluorine content of the water in Denver and Pueblo is respectively 0.5 p.p.m. and 0.2 p.p.m. and very little mottled enamel is found in these towns, although they are otherwise in every way similarly situated as Colorado Springs.

Sixteen years ago, Dr. F. S. McKay visited numerous towns in Colorado to establish the percentage of school children that had mottled enamel. In his report^a the towns were represented by key letters. I reproduce this table, and with Dr. McKay's permission the real names of the towns in question are published here for the first time, to compare the percentages found by McKay with the amount of fluorine occurring in the water.

In seventeen out of nineteen cases the agreement is excellent. In Arvada, Lafayette, Eastonville, Walsenburg, Louisville, Monu-

ment, La Junta, Pueblo and Trinidad, with fluorine percentages between 0.0 and 0.5 p.p.m. the incidence of mottled enamel was from 0 to 17 per cent. In Woodland Park, Colorado Springs, Green Mountain Falls, Palmer Lake, Pinon, Pictou, Manitou, and Fountain, with fluorine from 1.05 to 5.00 p.p.m. the incidence of mottled enamel ranges from 87.5 to 100 per cent.

It is easily understood that even in towns without any fluorine in the water supply a small percentage of mottled enamel occurs. In the first place it is difficult to discover where a child has lived during the first few years of his life. Holidays are often spent away from home, and it is not necessary to go far to find fluorine. We sometimes find that of two adjoining ranches one has water containing fluorine, while the other has not. An example of this kind occurs near Colorado Springs, where the children raised on the fluorine-containing water have mottled enamel, while the children raised on the next ranch have perfect teeth. In Walsenburg the water does not contain any fluorine, but the water of Pictou, a few miles distant, contains large amounts. It is no wonder that a small amount of mottling (12 per cent) occurs in Walsenburg, although the water is free from fluorine. It is not possible to explain 80 per cent mottling in Divide and the 50 per cent

TABLE 2

Correlation Between Mottled Teeth and Fluorine In the Water in Localities Surveyed by McKay.			
Key Letter	Name of Town	Percentage of Mottled Teeth Among School Children	Parts Per Million of fluorine in Water Supply
B	Divide	80	(a) 0
D	Alamosa	50 (mild)	0.4
F	Arvada	7	0.4
H	Lafayette	(b) 0	0
I	Eastonville	0	(c) 0
J	Woodland Park, nearly	100	1.5
L	Colorado Springs	87.5	1.2--4.0
M	Green Mountain Falls	100	2.0
N	Walsenburg	12	0
Q	Louisville	17	0
R	Monument	16	0.5
S	Palmer Lake	100	1.0
T	Pinon	100	0.8--2.2
U	La Junta	17	0.2
V	Pictou	100 (very severe)	5.0
W	Pueblo	18	0.2
X	Manitou	94.6	2.4
Y	Fountain	90.6	2.0
Z	Trinidad	0	0

(a) Water from well. (b) Mottled enamel among older inhabitants. (c) Water from school pump. The key letters in the first column and the figures from column 3, giving the percentage of mottled teeth, are from Mottled Teeth by F. S. McKay, Dental Cosmos, 1916.

mottling in Alamosa as simply. The water I analyzed in Divide comes from a well in the village and contains no fluorine. The village has twenty inhabitants, and most of the school children that McKay examined came from outlying ranches. Many of them probably used fluorine-containing water, as Divide is situated on the north slope of Pikes Peak, where most of the water contains fluorine. In Alamosa, where McKay found 50 per cent mottled enamel amongst the school population, mostly mild cases, the municipal water contains only 0.4 p.p.m. fluorine. However, in Alamosa, as in most parts of the San Luis Valley, a large part of the population does not use the municipal water supply but private artesian wells, situated in the backyard, from where the water is directly piped into the house.

In general the correspondence between the amount of fluorine in the water and the occurrence of mottled enamel among the population is remarkable and the exceptions (Firestone and Portland) are such as rather to strengthen our conviction that a fluorine content of more than one part per million will cause mottled enamel in at least 90 per cent of the native children. Recently H. V. Smith and Margaret C. Smith⁹ have published the result of a survey of Arizona for the occurrence of mottled enamel, and they come to the conclusion that a fluorine content of at least 3.7 p.p.m. is necessary for the production of mottled enamel. They used the same method for determining fluorine that Churchill⁷ used. Churchill found 2.0 p.p.m. fluorine in the municipal water from Colorado Springs, and I found the same amount by a different method. Since Colorado Springs is, so to say, the type locality for mottled enamel, it seems certain that the values found by Smith and Smith are too high.

Origin of Fluorine in the Water

The occurrence of mottled enamel has usually been associated with the use of water from deep wells, artesian wells, or springs. The frequent occurrence of fluorine in mineral springs had already been reported by Carles.¹⁰ The occurrence of fluorine in the surface water from Pikes Peak is more sur-

prising. The U. S. Geological Survey¹¹ reports that of fourteen samples of granite from the Pikes Peak region that were analyzed for fluorine, only one did not show any, while the others contained from 0.04 per cent to 1.0 per cent fluorine. This fluorine apparently exists in the granite in the form of small crystals of fluorite (calcium fluoride). In addition to this, veins of fluorite have been found in several places on the Pikes Peak watershed and are extensive enough to have been worked commercially. Several other rare fluorine minerals have been noted on Pikes Peak: cryolite, pachnolite, elpasolite, greaksutite, prosopite, and tysonite. In fact Pikes Peak is as rich in fluorine minerals as the Vesuvius, on whose slopes are found Pozzuoli and Resina, where mottled enamel was first observed. Calcium fluoride is a good deal more soluble than is usually believed. Using the titanium sulphate method for determining fluorine, I found that 24 parts per million fluorine (49.2 p.p.m. calcium fluoride) dissolve into distilled water when it is shaken with calcium fluoride. If great pains are taken to free the distilled water from carbon dioxide only 10 p.p.m. fluorine dissolves. Rain water always contains carbon dioxide dissolved from the air and calcium fluoride must be fairly soluble in it.

Relation of Mottled Enamel to Decay

McKay,¹² after inspecting many thousands of mottled teeth, thinks that they are not more prone to decay than normal teeth. This is also Ackeroys's¹³ opinion, and my own impression. Once a mottled tooth starts to decay, however, it deteriorates rapidly, as they are difficult to repair because of the brittle enamel and hard dentin.

Mode of Action of Fluorine on Teeth

Small amounts of fluorine seem to be a normal constituent of the tooth. The amount normally present is variously given from 63 to 13,600 parts per million.⁵ As feeding fluorine apparently increases the amount of fluorine in the teeth, it is possible that the discrepancy between the figures for the fluorine content of the teeth given by different authors is due to the analysis of teeth from regions with fluorine in the water and with-

out it. This is at present being investigated in our laboratory.

Phosphatase, the enzyme which liberates phosphoric acid from organic phosphates and thus aids in the deposition of calcium phosphate in growing bone or teeth, is known to be extremely sensitive to the toxic effects of fluorine which is harmless to most other enzymes. I would like to suggest as a possible explanation for the harmful effect of fluorine in the formative period of the teeth an interference with the proper action of the phosphatase.

Other Effects of Fluorine

A gallon of tapwater in Colorado Springs contains fluorine corresponding to 12 to 24 mg. sodium fluoride. Solis-Cohen¹⁴ states that repeated doses of 30 mg. sodium fluoride may prevent digestion and destroy appetite. McClure and Mitchell⁴ find that a percentage of 0.03 per cent fluorine in the food produces abnormal teeth while 0.06 per cent fluorine inhibits growth. If the lesion of the rat teeth is comparable with mottled enamel in the human, a dose twice as large as that which will produce mottled enamel, or 2 p.p.m., must be considered harmful for the general health.

Prevention of Mottled Enamel

The experience of Oakley has shown that mottled enamel may be prevented if water without fluorine is used until the ninth year. In towns obtaining their water from wells it may be possible to find water without fluorine in an adjoining well or at a different level. Wells a few miles apart or at different levels show great differences in their fluorine content. The problem for Colorado Springs and the other towns around the Pikes Peak watershed is more difficult. A survey by F. Martin Brown showed that practically all streams contributing to the water supply of Colorado Springs contain fluorine, although some contain ten times more than others. The nearest available source of supply of water free from fluorine (except some shallow wells in the Black Forest region) is the Arkansas near Buena Vista, which contains only 0.1 p.p.m. fluorine.

No method has been found to remove fluorine from a municipal water supply. On a

small scale, fluorine may be removed from water by absorption on animal charcoal or bonemeal. Two grams charcoal are sufficient to remove the fluorine from one liter of water. It is, however, simpler and cheaper to buy distilled water from one of the artificial ice companies. The above mentioned example of Portland, Colorado, shows that we should not expect too much from the provision of specially purified, fluorine-free drinking water.

Conclusions

The water supply of 169 towns in Colorado has been analyzed; 80 contained varying amounts of fluorine; 25 contained more than one part per million.

The presence of more than one part per million fluorine in the water is associated with the presence of mottled enamel in the teeth of 90 to 100 per cent of the native born children. On the other hand, no mottled enamel has been found in the absence of fluorine.

The principal endemic area is the Pikes Peak region; other towns with fluorine in the water supply and mottled enamel among the population are found on the plains and in the San Luis valley. No fluorine has been found west of the continental divide.

Children less than five years old should drink water free from fluorine.

REFERENCES

1. Eager, J. M.: *Dental Cosmos*, 1902, 44, 300.
2. Fynn, H. A.: (*Dental*) *Items of Interest*, 1910, 32, 31.
3. McKay, F. S., and Black, G. V.: *Dental Cosmos*, 1916, 58, 477.
McKay, F. S.: *Journal of Dental Research*, 1930, 10, 561. (This article contains an excellent bibliography.)
4. McClure and Mitchell: *Journal of Biological Chemistry*, 1931, 90, 297.
5. McCollum, Simmonds, Becker and Bunting: *Journal Biological Chemistry*, 1925, 63, 553.
6. Smith, M. C., Lantz, E. M., and Smith, H. V.: *University of Arizona. Agric. Exp. Sta. Tech. Bull. No. 32*, 1931.
7. Churchill, H. V.: *Journal Ind. & Eng. Chem.* 1931, 23, 996.
8. Steiger, G.: *Journal Am. Chem. Soc.* 1908, 30, 219.
9. Smith, H. V., and Smith, M. C.: *Univ. of Ariz. Agric. Exp. Sta. Technic. Bull. No. 43*, 1932.
10. Carles: *Comptes rendus*, 1907, 144, 37.
11. U. S. Geological Survey, *Bull.* 591, 117.
12. McKay, F. S.: *Dental Cosmos*, 1929, 71, 747.
13. Ackeroyd, W. J. R.: *Military Dental Journal*, 1923, 6, 7.
14. Solis-Cohen, S., and Githens, T. S.: *Pharmacotherapeutics*, New York, 1928, page 565.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Influenza Epidemic Spreads

Influenza first appeared in epidemic form in the Territory of Hawaii in June, when 914 cases were reported. In July, 4,996 were reported, and in August, 1,070. In addition to this, there was some evidence of increased prevalence of the disease in South Carolina and Georgia, for the week ending June 25. The increase in California was first noticed in the week ending July 9, when Southern California reported thirty-four cases as compared with nine for the corresponding week of 1931. For the week ending August 6, they reported 119 cases. About the same time, an increase was reported in Central California, notable Santa Clara County. It has been epidemic in California since, although it is believed that the peak for the state as a whole was reached in the week ending November 12. In the week ending October 8, there was a definite increase in Oregon, and increases in Texas, South Carolina, and Oklahoma. For the week ending October 15, there were additional increases in Washington State, Tennessee, Arkansas, Ohio, and Michigan. In the following week, there were general increases in the west-south-central group of states and in the east-north-central group. In the week ending October 29, increases were reported in Arizona, New Mexico, and Montana. It is probable that the wave reached British Columbia about this time. For the month of November, British Columbia reports 3,800 cases, and Dr. Young estimates there have now been over 30,000 cases; for the week ending November 12, Utah reported a marked increase; for the month of November, Denver, Colorado, had over 800 reported cases. Although reporting of isolated groups would indicate that an attack rate of 30 per cent is not unusual. There has been a slight increase in death rates in California in the last few weeks.

Winter and Health

There are many reasons why so many deaths occur during the cold, damp, winter months. The underlying cause, no doubt, is low resistance against disease. This low resistance is due to chilling of the body, insufficient sunlight, lack of fresh air, lack of exercise, rest and sleep.

The ultraviolet rays of the sun, which are so essential to good health, lose a great deal of their health-giving properties normally during the winter months on account of the greater distance of the sun from the earth. In addition to this normal decrease we have a further decrease due to cloudiness. It is also believed more and more by scientists that the smoke produced by the burning of soft coal in cities obstructs the passage of the ultraviolet rays.

There is no time of the year in which exercise is so essential as in the winter because it is then that disease is most prevalent and when there is the greatest need of strong body resistance. There is no doubt that if everyone did take regular exercise during the winter months, a great many colds and pneumonia cases and many deaths would be avoided.

During the winter months, when the human body is weakened by lack of sunshine and outdoor air and exercise, it is in need of more sleep than during the summer months. Nature, before the discovery of artificial light, compelled people to take more sleep during the winter by making the nights longer and the days shorter. The tendency of modern civilization has been to lay too much emphasis upon efficiency and not enough on the health needs.

Many individuals even get less sleep during the winter than in the summer because most of the club and social activities are scheduled for winter evenings. We believe that a great many cases of pneumonia, tuberculosis, and nervous exhaustion are caused by late hours. No individual can very often work all day, stay up until twelve or one o'clock at night, and be at work by eight in the morning without making himself an easy victim of disease.—From Bulletin of the Milwaukee Health Department.

BOOK REVIEWS

Man and Medicine. An Introduction to Medical Knowledge. By Dr. Henry E. Sigerist, Professor at the University of Leipzig. Introduction by Dr. William H. Welch, Professor of the History of Medicine, The Johns Hopkins University. Translated by Margaret Galt Boise. New York: W. W. Norton & Company, Inc.

This is an excellent book for the layman who desires authentic information as to the present status of medicine, how it was developed, how far and in what direction it has progressed toward an exact science and in what degree it yet remains an art. Its direct appeal, however, is to the student of medicine who will find in it both profit and interest.

The presentation is historical, tracing man's changing conceptions of the nature of disease from his primitive ideas of possession by devils to our modern knowledge of cellular injury by definite agencies. Consistently with man's primitive ideas of the nature of disease, he endeavored to free himself from it by incantation, prayer, and irrational empiricism, and it was not until he gained some exact knowledge of its cause and nature that its treatment became effective.

In proper chronological order, we find the great medical achievements and discoveries with an estimate of their influence on its subsequent development, particularly how advances in the means and methods of diagnosis became the foundation of modern medicine and its gradual progress toward an exact science.

A. J. MARKLEY.

Anatomy of the Brain and Spinal Cord. By William W. Looney, A.B., M.D. Professor of Anatomy, Baylor University College of Medicine, Dallas, Texas. With 153 illustrations. Second Edition, Revised. Philadelphia: F. A. Davis Company, Publishers. 1932. 370 pages. Price \$4.50.

Detailed anatomical knowledge should be the first essential to the scientific study of medicine. Usually this is attained only through dry, hard years of study in the dissecting room. The author in this volume has fairly well presented his subject in an interesting way, attempting at every opportunity to link anatomical fact with physiological function. It is largely a rearrangement and condensation of already published anatomical facts; but this he has done to a good advantage.

The last twenty-five pages are given over to Dr. Thomas H. Cheavens for a report of neurological cases that illustrate a loss of abnormality of function due to disease of some definite anatomical part.

This volume will be a valuable addition to the library of the anatomical student and those particularly interested in diseases of the nervous system.

J. R. JAEGER.

Neurology-Psychiatry, 1931, (Practical Medicine Series), edited by Peter Bassoe, Clinical Professor of Neurology, Rush Medical College or the University of Chicago and by Franklin G. Ebaugh, Professor of Psychiatry, University of Colorado Medical School. Chicago: The Year Book Publishers, Inc. 471 pages. Price \$2.25. Each year The Practical Medicine Series pre-

sents in eight volumes an epitome on progress in medicine and surgery during the twelve months preceding. For the past twenty-two years the volume on nervous and mental diseases has been edited by Dr. Peter Bassoe of Chicago. In the 1931 volume (published in 1932) Dr. Franklin G. Ebaugh, of Denver, appears as collaborator. Dr. Bassoe writes his review of the year's neurological publications in the first 310 pages of the book. Dr. Ebaugh then continues with psychiatry, carrying the volume to the tidy sum of 446 pages.

Dr. Bassoe writes under the captions: Symptomatology, The Neuroses, The Meninges and Cerebrospinal Fluid, Diseases of the Brain, Syphilitic Diseases, Brain Tumors, The Basal Ganglia, Diseases of the Spinal Cord, The Peripheral Nerves, The Vegetative Nervous System, The Endocrines. He prefaces these sections with the remark that "the year's neurological literature, rich as it is, has not given us the solution to any major problems."

Dr. Ebaugh handles his material under the headings: General Considerations, Minor Psychoses, Major Psychoses, Social Psychiatry, and Mental Hygiene. Ebaugh's prefatory remarks are interesting: "More papers are appearing which emphasize a closer relationship between psychiatry and the other divisions of medicine . . . There is no doubt but that the past tendency of the isolation of psychiatry from other medical fields in clinical and teaching schedules has interfered with the efficiency and productivity which can be expected from this fundamental branch of general medicine."

Both sections of this book represent much studious labor, and with it there has been combined good judgment in selecting suitable material to furnish a cross section of contemporaneous neurologic and psychiatric writings.

C. S. BLUEMEL.

Behavior Aspects of Child Conduct. By Esther Loring Richards, B.A., M.D., D. Sc., Associate Professor of Psychiatry, Johns Hopkins School of Medicine. New York: Macmillan, 1932. 299 pages. Price \$2.50.

One of the confusing things about mental hygiene is that it deals at times with the ordinary problems of child training and that at other times, without changing its captions, it treats of juvenile delinquency. This particular book by Dr. Esther Richards deals with "badness" and "nerves." To many people the title of the book would not be clear inasmuch as there is an implied differentiation between behavior and conduct. The author therefore explains: "Behavior is a word that implies a genetic interest in a person's actions; conduct is a word which implies a moral and a philosophic interest in a person's actions."

The book comprises a series of lectures given in the fall of 1929 at the request of the Baltimore branch of the Child Study Association of America. In Chapter I, the author gives a fair appraisal of mental hygiene in its present status of partial deflation: "From the behavioristic side of science one must frankly admit that we are confronted with a confusing amount of words and theories tending to proclaim some particular field of psychology and psychiatry as the one and only method of human salvation. A great deal of it is impractical and perfectionistic, smacking more of techniques and revelations than of an appreciation of the working components of real life. Is it ownership of the mental health of childhood or leadership that we are aiming at in our com-

petitive strivings? If it is leadership we must establish a basis for it by virtue of better production and less salesmanship."

The book is largely a recital of individual case histories. The author gives her viewpoint concerning the genesis of individual problems and presents the method by which she attempts to solve them. And here, of course, lies the weakness of the book—which is also the weakness of mental hygiene. Tom, the piper's son, steals a pig. The mental hygienist explains that Tom intended to sell the pig and to buy candy with the money. But Tom's motives were social and not mercenary. Tom was unpopular because he was red-headed and cross-eyed, and it was Tom's intent to purchase popularity by sharing his candy with his playmates.

The interpretation is ingenious, but it can rarely be verified. Interpreting motives and reactions is like interpreting dreams. One takes long shots and scores many misses. Often one merely draws a bow at a venture. Says Dr. Richards: "Now if a school child finds himself in the shoe of a grade that is too small or too big for him, he may react in a number of different ways according to his temperament. He may sink into laziness and carelessness and don't-care reactions, or he may play truant (in one year the school commissioners of a certain city reported twenty thousand instances of 'unlawful absences'); or he may become aggressively antagonistic, expressing his discontent or discomfortableness in stealing, in wandering away from home, in gang prankishness, or in sex overtures which we designate delinquency."—The reader may be amazed to find such diversity of reactions to identical situations, and he may suspect that the author is often wide of the mark.

Treatment in problem cases seems to be narrow in its scope. Of enuresis the writer says: "I know of nothing that can be done to help this distressing condition except to wait for its disappearance in time." Nothing can be done about nail biting. "It is far better to pay attention to bringing up the general hygienic standards surrounding the life of these neuropathic children." And there is difficulty in meeting major problems. "Many a child health situation must be consigned to hopelessness not because of the complexity of its mechanism, but because of the unmodifiability of the parental material behind it."

The treatment frequently consists in changing the environment, and among the case histories there is the oft repeated recommendation that the child be sent to a boarding home, a foster home, a summer camp, or a neutral environment. There is surprising lack of versatility in treatment, and even environmental change is made to sound a little dubious when the writer later remarks: "One would not think of transplanting cabbages on the eve of their maturity, and yet the process is far more harmful to human organisms."

On the whole it can be said of Dr. Richards' book that it presents much interesting material, but that the material is not correlated by generalization or by exposition of principles. However, this loose material is handled with common sense. Throughout the book there is a pleasant freedom from the conventional jargon of mental hygiene, and it is only in the final chapter that the author alludes to integration and psychobiology. The independent and personal viewpoint of the writer is refreshing. The obvious weakness of the book is the caustic and scolding manner which the writer affects in emphasizing her point of view.

This disagreeable feature of the book suggests the thought that there must be principles of mental hygiene applicable to writing and lecturing as well as to child training.

C. S. BLUEMEL.

Children's Tonsils In or Out, by Albert D. Kaiser, M.D., Associate Professor of Pediatrics, University of Rochester Medical School; Chief Pediatrician, Rochester General Hospital; Pediatrician, Rochester Dental Dispensary. Illustrated. Philadelphia, London, Montreal: J. B. Lippincott Company. 307 pages. Price \$5.00.

The early part of the book is devoted to historical facts pertaining to tonsillectomy. Also its anatomy and bacteriology are fully reviewed. The symptomatology of tonsillar adenoid enlargement and its effect on the anatomical and mental development of the child is discussed in detail. Dr. Kaiser has selected 4400 school children for his statistical study; 2200 of these have had their tonsils removed, and 2200 have not. Many interesting facts are disclosed by this careful analysis over a period of three and ten years. Some of the more important ones are as follows:

1. Recurrent tonsillitis, tonsils in, 36 per cent; tonsils out, 3 per cent.
2. Recurrent headcolds (over 10 year period), tonsils in, no change; tonsils out, no change.
3. Recurrent bronchitis (1000 cases), tonsils in, fever attacks; tonsils out, more attacks.
4. Recurrent pneumonia, mortality in pneumonia, tonsils in, not influenced; tonsils out, not influenced.
5. Cervical adenitis, tonsils in, 12 per cent; tonsils out, 3 per cent.
6. Acute otitis media, before 5 years of age, tonsils in, more attacks; tonsils out, fewer attacks. After 5 years of age, tonsils in, more attacks; tonsils out, fewer attacks.
7. Incidence of scarlet fever, tonsils in, more attacks; tonsils out, less attacks. Complications of scarlet fever, tonsils in, more attacks; tonsils out, less attacks. Bacteriology of scarlet fever throats, tonsils in, no change; tonsils out, no change. Bacteriology of diphtheria throats, tonsils in, many carriers; tonsils out, no carriers.
8. Primary attacks of rheumatic fever, tonsils in, 14 per cent more cases (3 year period); tonsils in, 30 per cent more cases (10-year period). Recurrent attacks of rheumatic fever, tonsils in, no difference; tonsils out, no difference. Cardiac complications of rheumatic fever, tonsils in, no difference; tonsils out, no difference.
9. Dental caries and stomatitis, tonsils in, twice as common; tonsils out, uncommon.
10. Cyclic vomiting, tonsils in, common; tonsils out, 45 per cent cases relieved.

Such things as nephritis, pyelitis, enuresis, pulmonary tuberculosis, allergy, asthma, and mental development are not influenced by the presence or absence of tonsils. The last few chapters are devoted to the complications following tonsillectomy; lung abscess and pneumonia in children occur about one in one thousand cases. The value of radiation to lymphoid tissue is discussed and the indications and contra-indications for tonsillectomy are briefly tabulated.

KEMP G. COOPER.

California's Medical Story. By Henry Harris, M.D. (Johns Hopkins University, Medical Department, 1899.) Associate Clinical Professor of Medicine, University of California; Chief of Medical Department, San Francisco Polyclinic. With an introduction by Charles Singer, M.D., D. Litt. University of London, London, England. Printed by the Grabhorn Press for J. W. Stacey, Incorporated. San Francisco, California. 1932. 421 pages. \$7.00.

California's Medical History is so intimately involved in its civil, military, and political history, and the progress and development of the country, that telling the story of the first necessarily involves the inclusion of many of the fascinating and thrilling events of the second. All of the first white physicians during the Spanish regime were either naval or military officers appointed by the home government and were of course closely tied in with the making of the civil history of the time.

This delightful book does not, however, begin its story of California Medicine with this period but with the older medicine of the California Indians. Dr. Harris tells of "The Making of the Shaman," their principles and practice, their therapeutics and prophylaxis, their specializations and contributions to therapy; then of the Spanish period, the Mexican period, the American period in acquisition, in organization, in progress, and in modern practice.

The volume contains an invaluable bibliography of 830 references pertaining to the history of the times and the medical events incident thereto. "With almost uncanny skill he has taken this vast amount of unassimilated material and combined it into a fascinating narrative of medicine in California from the time of the Indian Shaman up to about the year 1900. From the sweat house to the modern college, he passes through the Spanish period, the Mexican period, the Gold Rush, the Plague and all the dramatic events of California History. "He has prepared a model local history. When more such work becomes available a true inductive history of modern medicine will become possible."

One cannot read this charming and delightful history of the state of California without wishing that some one in Colorado with the skill and ability and industry to carry it to completion might undertake to record the almost equally interesting tale of the men and the times and the events of its pioneer days; for the filtration of invasion which found its way into California from the entry of Fernando Alarcon, who in 1540 entered the Colorado River region from the Gulf of California, found its way also into what is now New Mexico and southwestern Colorado. Colorado's gold rush, the Greeley and other colonies and the early days of tuberculosis treatment and the vast field of highly interesting events of the period present a wealth of material for such work.

This volume is a fine bit of book work, a credit to the Grabhorn Press. The binding is substantial and attractive, the paper is good and the margins wide. Indeed, the margins might have been narrower and the print somewhat larger with advantage. The reader has been given the pleasure of cutting the pages as he goes along, which some readers enjoy. The deckle edges add to the appearance of the volume. Even the jacket is in good taste. This book will be read with great interest and pleasure by many doctors and some laymen everywhere, but to Californians it should have a particular appeal.

Living, as he does, in Old Monterey, the writer of this brief review finds an unusual delight in

this "story." Many of the names and incidents mentioned in the first chapters of the book are intimately associated with the early history of Monterey, which was the first Capitol of the State of California. The Old Customs house, the first theatre in California, the San Carlos and Carmel Missions, the Thomas Larkin House, Colton Hall and many fine old adobe houses remain here as monuments of the earlier Spanish and Mexican occupation.

The price of the book may prevent some persons from buying it who might like to possess it. However, it offers the shopper of the "grateful patient" type an easy opportunity to find for a doctor friend a worthwhile gift that will not wend its way into the junk corner of the store room before the year is out. One sometimes buys for another, to satisfy a sense of obligation, an article he feels he should not afford for himself.

There is at the end of this volume a full index of the names of those who have helped to make the medical history of California, 260 in all, and an exhaustive index of subjects.

HORACE G. WETHERILL.

Monterey, California.

Fertility and Sterility in Marriage, Their Voluntary Promotion and Limitation. By Th. H. Van De Velde, M.D., Formerly Director of the Gynecological Clinic at Haarlem, Holland. Translated by F. W. Stella Browne. New York: Covici Friede, Medical Books. 448 pages.

Contraceptive advice at this time is being freely given; the statement of the patient that she does not desire to have any more children or "none now" seems to be sufficient. As physicians, we realize that at times, from the standpoint of health or other definite reasons, that proper methods of prevention are justifiable and right.

Wholesale prevention is wrong and it is well for the physician who gives that advice to read just such a book as this excellent, exhaustive, and carefully considered work of Van de Velde. Not all men are suited to give this advice. The physician who undertakes it should realize that each case is one of individual consideration requiring special knowledge of the problem, he must have psychological insight. The busy practitioner must find sufficient time to study the patient and appreciate the difficulties.

The book contains a collection of historical data. There is a practical religious consideration of abstinence and of contraception. The psychological effects of these subjects are carefully considered and scientifically presented.

Sterility in men and women, their causes and treatment are exhaustively treated. The different contraceptive methods are described as thwarting at coitus, appliances, temporary and permanent surgical sterilization. The psychic effects with each method, the efficacy and technic are thoroughly discussed.

There is a discussion of abortion, of its indications. The patient is apt to treat this subject least seriously; the physician has more conscience in the matter; the gynecologist and obstetrician are most careful of the responsibility.

The volume contains a very complete bibliography and an excellent set of illustrations. Much information on this subject may be gathered from the different texts on gynecology, but, excepting in a book of this nature, it will not be so completely covered in its various phases. The scientific reader will be enlightened, the sensuous disappointed.

CLARENCE B. INGRAHAM.

Practical Surgery of the Joseph Price Hospital. By James William Kennedy, M.D., F.A.C.S., Surgeon of the Joseph Price Hospital, Philadelphia; Consulting Surgeon to the Norristown, Coatesville and Chambersburg Hospitals; Formerly in charge of the Gynecological and Obstetrical Department of the Philadelphia Dispensary; Member of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, etc. Illustrated with 129 original half-tone plates. Some in colors. Philadelphia: F. A. Davis Company, Publishers, 1928. 861 pages.

If the reader picks up *Practical Surgery of the Joseph Price Hospital*, by Kennedy, with the idea of refreshing his mind with a lot of orthodox surgery, he will be greatly disappointed. The writer has carefully avoided the well trodden paths of orthodox teaching and writes only of those subjects in which he is not in accord with general teachings. Naturally, he will receive plenty of criticism. How many surgeons will agree that a greater number of patients will be alive from whom a malignant uterus has been removed by vaginal hysterectomy, at the end of any number of years, than from hysterectomy from above? To picture vaginal hysterectomy from the writer, it is the surgeons panacea—mortality one-fifth of 1 per cent, operative time two to three minutes—statistics from several thousand hysterectomies over a period of thirty years. The discussion on appendicitis is well worth any one's time to read. It gives the author a splendid opportunity to air his opinion of the physiological surgeon, and he may be right. How many will agree with the author in the use of the Price Coffin dam—even when properly used? His ideas on drainage? Not many. Read Kennedy's reasons. They are worth while.

The discussion on ectopic pregnancy, repair of the cervix, perineum and cystocele, are well worth reading. You will probably disagree with him about the needles used in repair work, but the author will be satisfied if you just read the chapters. Tubal and ovarian infections, puerperal or wound infection, the Murphy Button, hemorrhage and shock, Caesarian section, acute and urgent abdominal lesions, are all ably discussed according to the teachings at the Joseph Price Hospital, but remember these are not the teachings accepted by the profession in general. These are teachings of a pathological surgeon who believes in radical surgery and does it, and accepting his statistics over a thirty year period, his results justify the book. It seems strange that a man so radical in practically all his surgery is so conservative in gall bladder surgery, drainage, and follows fairly well the accepted ideas in the treatment of breast malignancies. With these two exceptions, you read the results of surgery on all types of abdominal and pelvic lesions, treated you may believe in an unorthodox manner and will be surprised at the results. Frequent repetition is made to force home ideas. Nursing the surgical patient, ligature and suture material, ether, toilet of the hands and rubber gloves are elaborated upon in chapters by themselves. These chapters show the sincerity with which he deals with his subject. The radicalness of the writer is proved by his attitude towards rubber gloves—absolutely condemned. His attitude toward our physiological surgeon will cause some men to wonder about their work. The question will arise, are these teachings in advance of the present day thoughts?

It is a well written book, his own ideas are

earnestly driven home. Each subject is carefully illustrated. This book is a eulogy from a student to his teacher, dead these twenty years, and when you read the epigrammatic sayings of Joseph Price, you appreciate he was a great teacher. Read the book; it is worth your while, and if this statement of the writer is remembered, "Surgery will never dictate to pathology, but pathological lesions will always dictate the limits of surgery", it may be the answer to his radical surgery, and his condemnation of the physiological surgery.

J. E. STRUTHERS.

Pioneer Medicine in the Western Reserve. Compiled by Howard Dittrick, M.D. Illustrations by Louis J. Karnosh, M.D. Cleveland: The Academy of Medicine of Cleveland. 1932. 110 pages.

This book is profusely illustrated by Louis J. Karnosh, M.D., 8 vo., heavy board binding. It gives a brief account of some of the medical pioneers in Cleveland. The text consists of short biographies of such men as David Long, who was Cleveland's first physician, and Moses Thompson, the first physician on the "Western Reserve."

The treatise has an appeal to the historian and to the individual interested in early Cleveland.

NOLIE MUMEY.

The Expectant Mother's Handbook. By Frederick C. Irving, A.B., M.D., Professor of Obstetrics, Harvard Medical School. Visiting Obstetrician, Boston Lying-in Hospital. With illustrations. Boston and New York: Houghton Mifflin Company. The Riverside Press, Cambridge. 1932.

More and more it is found that expectant mothers require and expect definite instruction concerning pregnancy and labor. Any simple handbook containing facts easily understood by the scientifically uneducated layman, is of real value.

Dr. Irving's book is a distinct contribution. It is well written, covers the subject thoroughly, possibly too thoroughly for the layman.

It is an excellent book for the obstetrician's library. The chapter on evolution, heredity, and determination of sex is a little too scientific for the average layman's understanding. Possibly future editions, and it is deserving of future editions, may be simplified and shortened to an extent making it even more valuable for the average expectant mother.

CUTHBERT POWELL.

The Differential Diagnosis of Endocrine Disorders. By Allan Winter Rowe. Director of Research, Evans Memorial, Massachusetts Memorial Hospitals, Boston, Massachusetts. Baltimore: The Williams and Wilkins Company. 1932. 220 pages. Price \$4.00.

This book treats differential diagnosis in an unusual way. Statistical evaluation of the various symptoms and laboratory tests are made and their occurrence noted respectively in diseases of the thyroid, pituitary, gonads, adrenals, and pancreas. In other words, a diagnosis is arrived at entirely from the frequency of the objective findings which fit each particular endocrinopathy. From this standpoint, it represents a distinct contribution and is authoritative because of the large number of cases studied, this number reaching five thousand.

ARNOLD MINNIG.

Genetic Principles in Medicine and Social Science. By Lancelot Hogben, Professor of Social Biology in the University of London. New York: Alfred A. Knopf. 1932. 230 pages.

This is a very interesting book, especially to those who are more or less familiar with the recent work on human genetics. It is, essentially, an analysis and criticism of modern writings and speculations, with particular emphasis on mathematical and statistical methods. The author attempts to "separate the wheat from the tares," and indicate what solid progress has been made and is likely to be made in the near future. From all this we may estimate the ultimate probable services of genetic studies to medicine and sociology. Some of the current fallacies and misunderstandings are exposed or subjected to destructive criticism. For example, to illustrate a common statistical error, suppose we want to determine the frequency in a population of some recessive character. It seems perfectly simple to take all the families in which it occurs, and count the number of individuals showing the character. This would do very well for families of spiders, but owing to the small size of human families, there would be a good many failing to show the recessive character at all, yet having the same inheritance as the rest. Such families would not be detected or counted, and consequently the statistical result, as given, would be wrong. This is, of course, a very elementary example, but it serves to show how easy it is to fall into error, while apparently following rigorously accurate methods.

The first chapter deals with the Problem of Twin Resemblance. From the consideration of this subject the author is led to various reflections on social arrangements and criticisms of those who, in his opinion, deduce more than is reasonable from the known facts. For instance: "Quite recently a disciple of Galton put forward a series of painstaking proposals for what he was pleased to call the eugenic reform of the House of Lords. He might with equal propriety have worked out a plan for the dietetic reform of the London Mathematical Society." Perhaps this citation may be used, not only to show the lively character of the discussion, but also a certain intellectual arrogance, amounting at times to a fault. One recognizes the mind of a reasoner rather than an experimenter. The second chapter is on "Single Gene Substitutions in Human Pathology," and is filled with interesting information of particular value to medical men. It is urged that more attention should be given to the prenatal environment of the individual.

The third chapter discusses "The Serological Data for the Study of Gene Localization," and is highly mathematical. It is concluded that this promising line of inquiry needs extensive cooperation. "If the science of human genetics is to progress rapidly, it is urgent that the machinery for organizing research of this type should be created with as little delay as possible. Little further advance will be made on the study of hereditary transmission in the human species through the work of isolated investigators."

We next come to "The Genetic Basis of Social Behavior." In summing up, the author strongly protests against a too simple-minded attitude. Thus, "The habit of referring to feeble-mindedness as if it were a single clinical entity is superficial and profoundly misleading." But, in particular, the disposition to underrate the importance of environmental factors stultifies many discussions, even those on current text-books used all over the country. Chapter five is on "The

Concept of Race," showing the difficulties involved in trying to determine the relation of race (in a biological sense) to social behavior, and the danger of making assumptions which have no scientific basis. The sixth chapter is on "The Nature of Genetic Selection in the Social Group," the seventh on "The Growth of Human Populations," the eighth and last on "The Social Application of Genetic Principles."

There is every temptation to write at length on the stimulating contents of these chapters, but it must suffice to say that they are well worth reading, though they should be read critically, as the author has read the work of his predecessors.

T. D. A. COCKERELL.

Infants and Children. Their Feeding and Growth.

By Frederic H. Bartlett, M.D. Director of the Department of Pediatrics Fifth Avenue Hospital, New York City. New York: Farrar and Rinehart, Inc. On Murray Hill. 409 pages.

This book of 424 pages includes not only a very clear exposition of orthodox feeding but concise directions for clothing, for the care of contagious disease and other affections of the young, for the management of household emergencies and training for regular habits. For mothers and nurses it should prove an invaluable compendium of knowledge in the rearing of healthy children.

J. W. AMESSE.

Treatment of Syphilis. By Jay F. Schamberg, A.B., M.D. Professor of Dermatology and Syphilology in the Graduate School of Medicine of the University of Pennsylvania; Former President of the American Dermatological Association, etc., and Carroll S. Wright, B.Sc., M.D., Professor of Dermatology and Syphilology in the Temple University School of Medicine; Associate Professor of Dermatology and Syphilology in the Graduate School of Medicine of the University of Pennsylvania; former President of the Philadelphia Dermatological Society, etc. New York, London: D. Appleton and Company. 658 pages. Price \$8.00.

This is a fine book; the authors are exceptionally well qualified to write it. They first discuss the many agents used in the treatment of syphilis, giving the history of their use, method or methods of administration, pharmacology and chemotherapy, proved histological changes, and toxic reactions. They also evaluate the efficiency of each of the anti-leucic agents, not only by the reported experimental and clinical evidence, but also as evidenced in their own clinic and private practice.

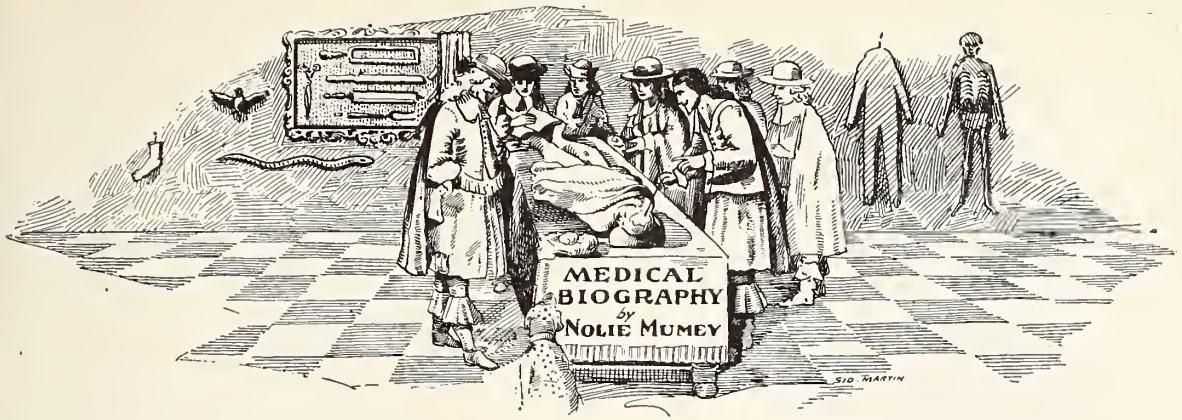
Next they discuss in detail the many methods of treating the different stages of syphilis and outline the advantages and disadvantages of each method of therapy and give their impressions as to the most efficient method of treating each stage of syphilis.

This volume of 658 pages, with 62 illustrations, is a valuable addition to the reference books dealing with the treatment of syphilis.

JACK G. HUTTON.

The Society's Executive Office is YOURS—USE IT. The new address is 537 Republic Building, Denver.

Take this Journal home to your wife.



SILAS WEIR MITCHELL

(Continued from March)

Dr. Mitchell was more than a master in medicine—he was a scientific searcher, a good stimulator for others, having unerring instincts combined with sound judgment and good common sense. His active mind was always alert to the investigation of a patient's symptoms regardless of how trivial the complaint. Although his methods were simple, yet they were successful, which is well illustrated in the instances here related.

A very wealthy man had consulted many of the prominent physicians of Europe for vertigo without obtaining relief. He came to Dr. Mitchell as a last resort; on examining his ears found a small fibrous body which was removed, giving the patient almost instant relief.

Another man who claimed he could not use his legs was suspected of malingering. The nurse was instructed to dust lamp black over the floor and leave the room. It was soon seen that both of his feet were covered with soot, which demonstrated that he could and did walk when not under observation.

Charles L. Dana said of him, "Weir Mitchell, without ever losing his laboratory habits, or scientific methods of thought, could not only acquire, but also contribute cultural interests to all those with whom he came in contact."

Dr. Mitchell's interest manifests itself not only in his strictly scientific writings, but also in many of his stories and novels. For ex-

ample, "Hugh Wynne" and "Circumstance" both describe senile changes; "Roland Blake" deals with hysteria; "Far into the Forest" gives some description of paranoia; "In War Time" and "Constance Trescot" both describe moral deterioration of character. "A Case of George Dedlow" illustrates the loss of individuality as a result of amputations. The writing of "George Dedlow" grew out of an argument with a friend. To prove his idea, Mitchell sat up most of the night and wrote the story of a man who lost all four limbs. He left the manuscript with the sister of Howard Horace Furness. Her father, Dr. Furness, sent it to Mr. Hall, editor of the *Atlantic Monthly*. Three months later a proof and check for eighty-five dollars were sent to the author. Dr. Mitchell wrote this in such a convincing manner that the account of it in newspapers was believed by numerous readers to be true, and money was raised for the unfortunate man, also many visits were made at the Stump Hospital to see him.

William H. Welch said of Dr. Mitchell, "He was a great physician; our leader, endeared and admired; our friend and counsellor, generous, wise, inspiring; a man of singular graces and accomplishments, active in advancing knowledge and in good work; a poet and a man of letters, a sweetener of life to both sick and well. As he said of Harvey, we may say of him—Weir Mitchell represented all that is best in the physician and the gentlemen."

(To be Continued.)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

SPECIAL MEETING, HOUSE OF DELEGATES OF THE COLORADO STATE MEDICAL SOCIETY

Denver, Colorado, March 11, 1933

MINUTES IN DETAIL

The meeting was called to order at 3:00 p. m. by the President, Dr. F. B. Stephenson.

President Stephenson: "Gentlemen, the House of Delegates will please come to order."

"As the first order of business, I will ask the Executive Secretary, Mr. Sethman, to read the official call of this meeting."

The official call was read by the Executive Secretary, as follows:

OFFICIAL CALL

To the Officers, Delegates, Committeemen and Members of the Colorado State Medical Society, Greeting:

A special meeting of the House of Delegates of the Colorado State Medical Society is hereby called for the following specific purpose:

To receive and pass upon recommendations of the Committee on Public Policy in regard to legislation pending before the Twenty-ninth General Assembly of the State of Colorado, and to make final determination of the policies of the Society in regard to such legislation.

Under the Constitution and By-Laws of the Society no other business except that outlined in the Official Call may be transacted.

The House of Delegates shall convene at 3:00 p. m., Saturday, March the Eleventh, Nineteen Hundred Thirty-three, in the Auditorium of the Capitol Life Insurance Company, East Sixteenth Avenue at Sherman Street, Denver, Colorado.

FRANK B. STEPHENSON, M.D.,
President.

Dated at Denver, Colorado, February 23, 1933.
By order of the President.

Attest:

HARVEY T. SETHMAN,
Executive Secretary.

President Stephenson: "I will now ask for the report of the Credentials Committee."

The report of the Credentials Committee was read by the Chairman, as follows:

REPORT OF THE COMMITTEE ON CREDENTIALS

Your Committee on Credentials presents the attached list of properly accredited delegates and alternates as the list from which this Special Meeting of the House should draw its roll call.

At the time of preparing this report, five of the constituent societies had not yet submitted their 1933 reports of officers to the Executive Secretary. Your Committee assumes that these societies have not yet held their 1933 elections. We therefore certify the hold-over delegates of these societies, subject to amendment of our report by the House in case other delegates are properly certified by the time the House convenes. The aforementioned societies are: Garfield County,

Kit Carson County, Morgan County, Prowers County, and San Juan District.

Respectfully,
LORENZ W. FRANK, Chairman.
W. A. CAMPBELL, JR.,
HAROLD T. LOW.

The list follows:

<i>Society</i>	<i>Delegates</i>	<i>Alternates</i>
Arapahoe	W. C. Cryslar	H. B. Catron
Boulder	H. H. Heuston	C. H. Graf
"	John Andrew	W. P. Woods
Chaffee	J. P. McDonough	C. R. Fuller
Crowley	W. M. Desmond	J. E. Jeffery
Delta	A. C. McClanahan	Lee Bast
Denver	H. I. Barnard	G. B. Kent
"	K. D. A. Allen	G. M. Blickensderfer
"	H. R. McKeen	J. E. Connell
"	F. E. Rogers	H. I. Laff
"	W. H. Halley	E. R. Mugrage
"	G. E. Cheley	H. J. Corper
"	Duval Prey	Arnold Minnig
"	T. P. Sears	H. J. Freeland
"	R. W. Danielson	L. V. Tepley
"	G. Heusinkveld	R. M. Shea
"	W. C. Finnoff	Maurice Katzman
"	J. A. Philpott	J. M. Foster, Jr.
"	H. S. Finney	W. M. Bane
"	C. F. Kemper	C. E. Cooper
"	J. M. Shields	E. J. Perkins
"	H. G. Garwood	W. A. Sedwick
"	J. S. Bouslog	J. R. Jaeger
"	E. G. Faber	R. G. Packard
"	C. H. Darrow	H. W. Snyder
"	W. B. Yegge	L. V. Sams
"	W. R. Waggener	V. E. Sells
"	O. S. Fowler	J. G. Ryan
El Paso	D. A. Vanderhooff	L. R. Allen
"	M. O. Shivers	L. A. Miller
"	J. A. Sevier	F. O. Kettlekamp
"	E. B. Liddle	J. T. Williams
Fremont	R. E. Holmes	R. C. Adkinson
Garfield	R. B. Porter	W. R. Tubbs
Huerfano	J. M. Lamme	W. S. Chapman
Kit Carson	W. L. McBride	A. J. Bender
Lake	F. N. Cochems	John J. Gasser
Larimer	C. H. Platz	T. C. Taylor
"	W. B. Hardesty	B. B. Beshoar
Las Animas	D. D. Costigan	E. H. Peterson
Mesa	G. C. Cary	F. G. Didrickson
Montrose	Isaiah Knott	C. F. Eakins
Morgan	I. J. Clark	J. W. Kinzie
Northeast	J. E. Naugle	A. C. Sudan
Northwestern	Duane Turner	B. F. Blotz
Otero	R. S. Johnston	R. M. Fulwider
"	B. B. Blotz	F. E. Casburn
Prowers	C. T. Knuckey	J. D. Geissinger
Pueblo	H. T. Low	J. S. Norman
"	R. C. Robe	G. E. Rice
"	G. M. Myers	Burgett Woodcock
San Juan	A. L. Burnett	W. A. Schoen
San Luis Valley	O. P. Shippey	
Weld	W. P. Allen	
"	O. E. Bennell	

President Stephenson: "The Executive Secretary will please call the roll from the official list."

The roll was called by the Executive Secretary, who announced that thirty-six delegates were present.

President Stephenson: "Is there any amendment to the report of the Committee on Credentials, or anyone to be seated whose name has not been called? If not, I will entertain a motion to adopt the report of the Committee on Credentials."

The motion was made, seconded, and unanimously carried.

Treasurer L. W. Bortree: "Mr. President, I am rather interested in the finances of the State Society. At the present time we are not extremely wealthy. The cost of this special session will be largely determined by the discussions. If it is the ruling of the House of Delegates that the reporter take down all discussions and remarks made at this meeting, the reporter's fee for this special session will be very high. I should like to see the expense held down as much as possible, and I therefore move that the reporter be instructed not to take down in detail all the discussion, but merely the motions made, the names of the men speaking in favor of the subject and those speaking against the subject, and the votes, in order to reduce our expenses to the minimum."

The motion was seconded.

President Stephenson: "You have heard the motion. Is there any discussion?"

Dr. L. V. Tepley: "Much as we suffer from the depression, I am against this motion. As I understand it, we have some very serious matters to discuss at this meeting, and some of us may want to refer later to some of the things that are said. I hope that our expressions will be in a feeling of good fellowship and that the actions will be for the benefit of the Society and everyone concerned; but, at the same time, in case it should not turn out that way, we may want to go over these things and want to know what is said. For that reason, I doubt very much whether this motion is a wise or economical procedure and whether it would not be money well spent to have everyone cited verbatim, to have his opinion and expressions recorded."

There being no further discussion, the motion was put to a vote, and announced by the chairman as carried, 23 to 6.

Dr. G. M. Blickensderfer moved that on the motions made on the bills to be reported, the voting be conducted by secret ballot. Discussion by Dr. Low and the President. Motion put to a viva-voce vote and lost.

It was moved by Dr. Garwood, seconded and unanimously carried, that Dr. W. S. Fleming be seated as the delegate of the Northwestern Colorado Society. Additional delegates seated since the calling of the roll brought the total to forty-one.

The Executive Secretary gave a short resumé of the bills in the legislature in which the medical profession is interested.

Dr. W. W. King, chairman, presented the report of the Committee on Public Policy, as follows:

REPORT OF THE COMMITTEE ON PUBLIC POLICY

Your Committee on Public Policy offers a general report of its activities in regard to legislation, followed by supplements containing its findings and recommendations with regard to proposed laws pending in the Twenty-ninth General Assembly.

Since the Society's Annual Session in Estes Park last September your Committee has held sixteen regular meetings in the Society's Executive Office in Denver. In addition to these a considerable number of informal conferences of three or more members of the Committee have been held. A quorum attended every regularly called meeting. At this time the Chairman and the Denver members of the Committee wish to express their deep appreciation of the attendance of those members of the Committee from other cities who have given freely of their time and valued judgment to the Committee's work. The Committee also wishes to express its appreciation to the twenty-two subcommittee members in various cities and towns of the state, and to the officers of our county societies, who have responded willingly to requests for assistance. Meetings of the committee held in early autumn were devoted primarily to investigation of the medical attitude of candidates for the Legislature; the remaining meetings since that time being devoted almost wholly to investigation of proposed legislation.

A large number of bills affecting medicine and public health are pending in the Legislature. Your Committee will not attempt to report upon each separate bill, but will rather discuss them by groups, since many bills are duplicates of each other, and some are supplementary to each other. At the same time the Committee reminds the House that there are many medical bills introduced in the Legislature by title only, it being obviously impossible to determine the exact purpose of some of these bills.

Your Committee has tried to study each legislative problem with consideration of its effect on the general public as well as on the medical profession, from a viewpoint wholly divorced from prejudice. Recognizing that there are some doctors not in agreement with the policies which the Committee has favored, and some who have questioned the good faith of the Committee, we earnestly seek the advices of the House of Delegates and assure the House that your Committee will actively support your prevailing instructions. The Committee hopes that the members of the House will discuss all these legislative questions fully and completely, so that your conclusions will reflect the mature judgment of the organized profession.

There are in these legislative proposals several highly controversial matters, wherein the Committee recognizes that sharp differences of opinion exist within the profession. In order that these differences of opinion may have free expression before the House, your Committee most respectfully requests that certain doctors, not members of the House, may be accorded the privilege of the floor that they may present their views for your consideration. This request particularly includes representatives of the Advisory Committee to the School of Medicine, the Committee on the

State Registration Law, and the Committee on Workmen's Compensation Affairs.

Respectfully,

COMMITTEE ON PUBLIC POLICY.

W. W. KING, Chairman;
H. R. McKEEN, Vice Chairman;
EDWARD DELEHANTY,
GERRIT HEUSINKVELD,
A. L. BEAGHLER,
W. W. HARMER,
O. D. GROSHART,
L. L. WARD,
A. C. HOLLAND,
F. B. STEPHENSON, Ex-Officio;
LORENZ W. FRANK, Ex-Officio;
MR. H. T. SETHMAN, Ex-Officio.

It was moved, seconded and unanimously carried that the report be accepted and approved.

Dr. King presented the following supplemental report:

**SUPPLEMENT TO THE REPORT OF THE
COMMITTEE ON PUBLIC POLICY**

The Basic Science Law

Your Committee has studied the operation of the Basic Science Law in those states which have enacted it, and has proposed such a law for Colorado.

We recommend that the Basic Science Law be advocated as the heart of our Society's legislative program, as representing a sound policy, opposition to the main tenets of which cannot be logically sustained.

Respectfully,

W. W. KING, Chairman.

It was moved, seconded and unanimously carried, that the supplemental report be accepted and approved.

Dr. King presented the following further supplement:

**SUPPLEMENT TO THE REPORT OF THE
COMMITTEE ON PUBLIC POLICY**

Public Health Reorganization

Your Committee gave careful consideration to the Ireland Commission's Health Code, and gave it unqualified approval, as representing the same character of progressive legislation as does the Basic Science Law. The present status of this bill is uncertain, since the Governor's general reorganization bill presents some conflicting details.

We recommend whole-hearted support of the Ireland Health Code, but we recognize that we may have to accept the Governor's plan with such modifications as we are able to obtain toward conformity with the Ireland bill.

Respectfully,

W. W. KING, Chairman.

It was moved and seconded that the supplemental report be accepted and approved.

The motion was discussed by the President, and by Drs. Tepley, Heusinkveld, Barnard, Elder, and Garwood.

The motion was put to a viva-voce vote and carried.

Dr. King presented the following supplement:

**SUPPLEMENT TO THE REPORT OF THE
COMMITTEE ON PUBLIC POLICY**

Liquor Legislation

Your Committee has been assured by those in charge of rewriting Colorado's liquor control laws that the bothersome license fees and red tape of

existing medicinal liquor regulations will be eliminated, all restraints upon physicians conforming to existing or future federal regulations. As far as we have been able to learn, this is the tenor of all pending bills on the subject which are likely to receive serious consideration.

Believing this to represent the desire of our profession, we recommend support of such legislation.

Respectfully,

W. W. KING, Chairman.

It was moved, seconded and unanimously carried that the supplemental report be accepted and approved.

Dr. King presented the following supplemental report:

**SUPPLEMENT TO THE REPORT OF THE
COMMITTEE ON PUBLIC POLICY**

**Legislation Affecting the School of Medicine and
Its Teaching Hospitals**

As is generally known, a series of bills pending in the House of Representatives have as their purposes: to close Colorado General Hospital, Colorado Psychopathic Hospital, and the University of Colorado School of Nursing for a period of four years; to turn the physical properties of these institutions into an auxiliary insane hospital under control of the Colorado State Hospital for the Insane at Pueblo; and to require that the University of Colorado School of Medicine make arrangements for teaching hospital purposes with other public or private hospitals in Denver.

Your Committee made a thorough study of the problems involved, presented to it at two hearings representing both those favorable and those unfavorable to these measures. The Committee voted unanimously against the measures.

The Society's Advisory Committee to the School of Medicine has worked assiduously toward bettering the relations between the practicing profession and these hospitals. As that Committee's published reports show, it has already brought about certain administrative changes on the part of the hospitals toward this end. The Advisory Committee has further proposals which may involve legislation now pending, and which have already been presented to your Public Policy Committee. Therefore we have asked that the Chairman of the Advisory Committee present a report direct to this House, supplemental to our own recommendation concerning the bills above noted.

Respectfully,

W. W. KING, Chairman.

President Stephenson: "Before going further, I will call on the Chairman of the Advisory Committee to read his report."

Dr. J. S. Bouslog presented the following report:

**REPORT OF THE ADVISORY COMMITTEE TO
THE SCHOOL OF MEDICINE**

To the Public Policy Committee of the Colorado State Medical Society:

The Advisory Committee to the School of Medicine wishes to refer the following recommendations to you for your consideration:

1. The Committee advises that the Colorado General Hospital should be for indigent patients only. To accomplish this would require a change in our present laws. The Committee feels that it may be inadvisable to ask for such a change of law at the present legislative session, but the Public Policy Committee can decide the advisability of this act.

2. The Committee advises that the Colorado General Hospital and Medical School be not closed, providing the Board of Regents will recognize and consult the Colorado State Medical Society regarding the medical and hospital policies of these institutions.

Regarding the Psychopathic Hospital:

Authorities of the University of Colorado have taken it upon themselves to appoint their own special Advisory Committee for the Colorado Psychopathic Hospital; therefore, your State Medical Society Advisory Committee withholds further recommendations concerning the Colorado Psychopathic Hospital pending dissolution of the University's special committee.

3. The Committee advises that all patients admitted to the Out-patient Department and Colorado General Hospital be required to sign an application similar to the enclosed form*, with a penalty clause; the penalty clause to be decided upon by your Committee as to the proper wording and proper changing of our present law, but we advise that one-half of any fine shall go to the State Treasury and the other half shall go to the Colorado State Medical Society.

4. We advise that, should the present law regarding admissions to the Hospital not be changed, the following law be repealed: Paragraph 2 of Section 6 of Chapter 186 of the Session Laws of Colorado, 1923, which reads as follows:

"What other cases may be admitted to the Hospital:—Students of the University and such other patients as to the Board of Regents, to an extent that will not interfere with the primary purpose of said hospital as set forth in Section 3 may direct, may be received in said hospital whenever there is room. The Board of Regents may always admit to the hospital such cases as they deem are emergency."

5. The Advisory Committee has accomplished certain results, and has obtained recognition by the Board of Regents, through the Dean of the Medical School, as reported in the January, 1933, issue of Colorado Medicine. There are several problems now under consideration, solution of which will, we hope, further correct the misunderstandings between the Colorado General Hospital and the physicians of the State.

Respectfully submitted,

J. S. BOUSLOG, Denver, Chairman;
T. D. CUNNINGHAM, Denver;
C. O. GIESE, Colorado Springs;
N. A. MADLER, Greeley;
C. E. SIDWELL, Longmont;
F. B. STEPHENSON, Denver, Ex-Officio.

Discussion by the President and Dr. Garwood. Motion by Dr. Tepley that the discussion be limited to not to exceed fifty minutes, twenty-five minutes to each side, in the discussion of this particular section of the Public Policy Committee's report. Motion ruled out of order by the President, Dr. Tepley not being a member of the House of Delegates.

It was moved, seconded and carried that this session adjourn at or before 6:00 p. m.

It was moved by Dr. R. S. Johnston that the supplemental report of the Committee on Public Policy be accepted and approved. The motion was seconded. The chair called for discussion. None being offered, the motion was put to a viva-voce vote and carried.

Dr. King thereupon presented the following supplemental report:

SUPPLEMENT TO THE REPORT OF THE COMMITTEE ON PUBLIC POLICY

The Annual Registration Law

In 1931 this House created a special committee to study and report on the Annual Registration Law, and in 1932 the House continued the committee.

That special committee has reported its findings to us and is now ready to report to the House. Since legislation is pending which would cover the special committee's recommendations, we have asked its Chairman to report direct to the House at this session.

Respectfully,

W. W. KING, Chairman.

It was moved by Dr. Carey, seconded and carried, that the supplemental report be accepted and approved.

Dr. R. W. Arndt then presented the following report:

REPORT OF THE COMMITTEE ON STATE REGISTRATION LAW

Gentlemen:

At the 1926 Annual Session of the Society in Colorado Springs, the House of Delegates adopted a report of the Committee on Public Policy recommending that an annual registration law be proposed to the 1927 Legislature. Such was done, but the legislature did not pass the bill because doctors generally opposed the action of the organized Society.

At the 1927 Annual Session in Glenwood Springs, the House again adopted a Public Policy report approving the registration law and recommending that a program of education of the physicians be undertaken to acquaint them with the need for a registration law.

At the 1928 Annual Session at Colorado Springs, action was again taken, virtually duplicating the 1927 action.

The 1929 legislature passed the law, making it effective January 1, 1930.

At the 1929 Annual Session in Greeley, the Public Policy Committee reported the passage of the bill, stating that the Committee had remained neutral on the law, since the Committee was about evenly divided and since the profession generally also seemed about equally divided.

There was no action on the matter at the 1930 Annual Session in Pueblo.

At a Special Session of the House of Delegates in January, 1931, there was vigorous discussion pro and con concerning the registration law, and the House finally adopted the recommendation of the Public Policy Committee that the law be retained for two more years, to give it a three-year trial as had been requested by the Board of Medical Examiners.

At the 1931 Annual Session in Colorado Springs, Western Slope delegates formally requested the House of Delegates to oppose the continuance of the law. There was a long discussion of it, both pro and con, and Dr. W. W. Williams, Secretary of the Board of Medical Examiners, presented a defense of the law. The House finally adopted a motion creating a special Committee to study the law.

Your Special Committee has given the matter a good deal of thought and consideration. This has included not only a perusal of the records, but interviews with Dr. Williams and Mr. Charles Haines, the attorney for the Board.

*Copies of the proposed application form are on file in the Executive Office of the Society.

It is our judgment that the registration law has been given a fair trial; that the Society's Executive Office and the Society's Committees have given every possible aid to the Board in its administration of the law. We believe that the act has failed to accomplish the purposes for which it was supported by the Society; even granting that these purposes are constitutional and that they are within the proper scope of the Board's activities. The law has not resulted in a larger number of prosecutions of illegal healers, nor in a larger number of trials before the Board, of practitioners charged with violation of the medical practice act. About the only accomplishment among those which its proponents promised is the publication of an annual directory of licensees.

The Committee has the opinion of an able attorney that the provision making it mandatory to revoke a license summarily and without notice or hearing, for failure to pay for three consecutive years, may be successfully challenged as invalid, as being unreasonable and perhaps unconstitutional, as taking a valuable property right without due process of law.

It is unnecessary to stress that the trend of the times is toward reduction in governmental expenditures. In 1926 there were 275 applicants for licenses to practice in Colorado; last year there were 125. At some sessions of the Board, which are held quarterly, the number of applicants to be examined is down as low as two or three.

The Medical Practice Act provides for nine members of the Board. It seems to us that five could now easily do the work demanded of the Board.

Your Committee feels that the law encourages the Board to greater expenditures than are necessary, and to extension of their work into fields not contemplated within the spirit of the Medical Practice Act. Too much money is expended for routine secretarial work, most of which is done by the assistant secretary anyway. Too much money is spent for legal help; for instance, there was expended last year for legal purposes, including salaries, attorney's fees, travel costs, investigation, etc., the sum of \$4,394.38.

The Board has two functions, that of granting and that of revoking licenses; beyond this it cannot go legally. The violation of the medical practice act by a person not licensed to practice, is no concern of the Board. This must be dealt with by the prosecuting attorney, whose duty it is to see that those charged with such violations are brought to justice.

Our recommendations are as follows: (1) That the Annual Registration Law be repealed; (2) that to compensate for the reduction in income of the Board thus effected, that the Medical Practice Act be amended so as to provide for a Board of five members instead of nine, and that a further amendment make provision for the Attorney General to be the legal adviser of the Board.

Respectfully,
R. W. ARNDT, Chairman;
T. E. BEYER,
F. E. ROGERS.

It was moved and seconded that the report be accepted and approved.

Discussion by Dr. H. W. Snyder, Dr. Webb, Dr. Garwood, Dr. Barnard, Mr. Sethman, Dr. Beyer, Dr. Rogers, Dr. Arndt, Dr. Knuckey, Dr. Shivers.

The motion was put to a viva-voce vote and carried.

Dr. King thereupon presented the following further supplemental report:

SUPPLEMENT TO THE REPORT OF THE COMMITTEE ON PUBLIC POLICY

Workmen's Compensation Legislation

The Society's Special Committee on Workmen's Compensation Affairs has made a study of proposed legislation in that particular field, and has reported its findings to us.

We are asking this Special Committee to carry its report direct to the House at this session, and we therefore make no recommendation upon it.

Respectfully,
W. W. KING, Chairman.

It was moved, seconded and unanimously carried that the report be adopted.

Dr. A. S. Cecchini thereupon presented the following report:

REPORT OF THE COMMITTEE ON WORKMEN'S COMPENSATION AFFAIRS

The Colorado State Medical Society's Special Committee on Workmen's Compensation Affairs has held several meetings in regard to existing conditions of compensation laws and regulations as they affect physicians, and wishes respectfully to make the following recommendations concerning compensation legislation:

1. A Senate Bill which would force the State Industrial Commission to send most of its x-ray work in compensation cases to Colorado General Hospital has apparently been defeated. We recommend opposition to this measure against the possibility of its being revived.

2. We recommend that legislation be advocated to allow every member of the State Medical Society who is properly qualified in industrial surgery, to serve injured workmen under the compensation laws, in contradistinction to existing regulations whereby such work is limited by the Industrial Commission to a small list of chosen surgeons.

3. Should it be impossible to secure legislation effecting our proposal No. 2, we recommend that the House of Delegates direct the Board of Councillors of the Society to investigate the ethical questions which we believe are involved. The Industrial Commission causes the publication and distribution of placards displaying a small list of favored physicians, whom we believe are, by such action, being unwittingly advertised by the Industrial Commission in an unethical manner.

4. A measure is under consideration in the House of Representatives which would allow the injured workman to call the healer of his choice, even though such healer be a cultist with a limited license, or a faith healer. We recommend that this and similar measures be opposed, and that treatment of injuries under the compensation laws be limited to treatment by persons regularly licensed to practice medicine and surgery.

We wish to point out that, in addition to the above noted proposals, many measures are pending in both houses of the legislature concerning workmen's compensation. Many of these bills would not affect the medical features of the laws, but many others are introduced by title only, and their real intent is therefore unknown. We recommend that policies in regard to these unidentified measures be left to the discretion of the Committee on Public Policy; and in this connection we wish to offer the Public Policy Committee our whole-hearted cooperation and our

willing service in whatever work the Public Policy Committee may assign to us.

Respectfully,

COMMITTEE ON WORKMEN'S COMPENSATION AFFAIRS,

By A. S. CECCHINI, Chairman.

The chair obtained unanimous consent to consider the report by paragraphs.

On motion, duly seconded and carried, the first recommendation of the report was adopted and approved.

It was moved and seconded that the second recommendation be accepted and approved.

Discussion by Drs. Knuckey, Bonham, Cecchini, H. W. Snyder, Platz, Holmes, T. F. Howell, Waggener, Low, Halley, Knuckey, Fowler, Norman, B. B. Blotz, Johnston, Barnard, and Heusinkveld.

The motion was put to a viva-voce vote and carried.

Paragraph No. 3 was ruled by the Chairman to be out of order for consideration at this meeting, to which there was no objection.

It was moved, seconded and carried that paragraph No. 4 be accepted and approved.

The final section of the report, on motion seconded and unanimously carried, was accepted and approved.

It was moved by Dr. Yegge, seconded and carried unanimously, that the report of the Public Policy Committee as a whole be adopted.

Dr. Halley: "At this time, if we are through with the reports, I should like to move a resolution of entire confidence, and pledge to the Public Policy Committee our unanimous support in carrying out its program; and also our appreciation.

Dr. Sears: "I have prepared such a resolution, which I will read."

Dr. Halley withdrew his motion.

Dr. Sears thereupon presented the following resolution:

RESOLUTION

Whereas, Up to the present time the medical profession of Colorado has failed to present an united front before the Twenty-ninth General Assembly in regard to public health and medical legislation, and

Whereas, Developments within the General Assembly have shown that the collective and individual interests of the members of the medical profession have greatly suffered from the widespread discussion of the profession's internal differences; now, therefore,

Be It Resolved, by the House of Delegates of the Colorado State Medical Society, in Special Session assembled: That personal opinions, personal preferences and minority differences must yield and defer to the judgment of the majority for the common good, and

Be It Further Resolved, That this House declares it to be the duty of each and every member of the Society loyally to support to the best of his ability and talents the program and policies adopted by this House, and

Be it Further Resolved, That this House does publicly express its confidence in the Officers and Committees of this Society and does pledge to said Officers and Committees its unqualified support and cooperation.

Dr. Sears moved the adoption of the resolution. The motion was seconded by several, put to a viva-voce vote and carried.

General discussion of political problems in the Legislature by Dr. Low, Mr. Sethman, Dr. Tepley, Dr. Barnard, Dr. King, Dr. Blotz and President Stephenson.

Motion by Dr. Carey, that the session adjourn. Adjournment at 5:45 p. m.

Registration Statistics

Delegates and alternates seated, 41; other members registered, 36; total, 77. An unofficial count indicated that approximately thirty additional members attended without signing the register.

The foregoing minutes of the Special Meeting of the House of Delegates are hereby respectfully submitted to the Society.

HARVEY T. SETHMAN,
Executive Secretary.

Time Limit Extended For Dues Payments

AMONG the many embarrassments created by the declaration of the bank holiday early last month was that occasioned by the holiday falling just at the time many doctors would have paid their county and state medical society dues. Under the State Society By-Laws, dues become delinquent if not received by the state office on or before March 5, and members still unpaid on April 1 must be suspended.

The Board of Trustees of the State Society took immediate cognizance of the situation, and by long-distance conference entered an order extending the time until May 1. Therefore every member has until May 1 this year to pay his annual dues through his county society secretary, without penalty. The Board of Trustees addressed a letter to the secretaries of all county and district societies notifying them of this action.

The official order of the Trustees is quoted from that letter:

"By authority of emergency powers granted to the Board of Trustees by the By-Laws of the Society:

"The last day for payment of 1933 State Medical Society dues without penalty is hereby extended to May 1, 1933;

"All constituent societies are hereby urgently requested to take similar action, within their respective powers, in regard to their local society assessments."

Obituary

Earl H. Bruns

Col. Earl H. Bruns, Colonel, Medical Corps, U. S. A., died in El Paso, Texas, March 16, 1933. Colonel Bruns was born June 12, 1879, in Indiana. He received the degree of Doctor of Medicine from Miami Medical College, Ohio, in 1903.

He entered the army as a contract surgeon in 1904. He was an honor graduate of the Army

Medical School in 1905 and was appointed acting surgeon May 1, 1905. From this time on he steadily advanced both professionally and in his military rank. He had a vast experience in tropical medicine and in tuberculosis, and during the World War had charge of all tuberculosis work in the army, with headquarters in Washington, directing the establishment of all tuberculosis hospitals for the army. He sailed for overseas duty in September, remaining on duty in France until the signing of the armistice, when he was sent to investigate tuberculosis among the civil population in Germany, with a special reference to its bearing on feeding and its problems. He was then made chief surgeon of the American forces in Germany, which position he held for about a year.

He joined the Fitzsimons General Hospital for duty in September, 1921, and was assigned as chief of the medical service, which assignment he held until his departure on June 5, 1926, for duty in the Philippines. Upon completion of his tour in that department, he was reassigned to Fitzsimons and returned in December, 1928, resuming his former duty as chief of the medical service, continuing in that capacity until the onset of the illness which brought about his death. He was regarded as one of the foremost tuberculosis experts in the country.

Colonel Bruns was an honorary member of the Medical Society of the City and County of Denver, a Fellow of the American Medical Association, Fellow of the American College of Surgeons, and a member of the American Climatological and Clinical Association, and held membership in several military medical organizations. His remains were buried with military honors in Arlington Cemetery, Washington, D. C.

G. M. B.

Willard W. Hills

Dr. W. W. Hills of Colorado Springs died at his home March 15. He was 71 years old, and had practiced medicine for forty-eight years.

Dr. Hills was born Feb. 22, 1862, in Illinois. As a young man he moved to Colorado and began the study of medicine at the Denver College of Medicine, where he was graduated in 1884. He first practiced at Aspen, Colorado, as a surgeon for the Denver and Rio Grande railroad. Later he practiced in Colorado Springs, in Denver, and in Fort Collins, and for one period of ten years he was surgeon for the Doheny Oil Company in Mexico. He resumed practice in Colorado Springs in 1925. He was active in the affairs of the El Paso County Medical Society until his retirement from practice a year ago, at which time he was elected an honorary member of his County Society.

Surviving him are his wife, three daughters, one son, Dr. W. K. Hills, and seven grandchildren, to whom the sympathy of his colleagues is extended.

William M. Spitzer

Dr. William M. Spitzer was born in Prince George County, Virginia, in 1875. He was graduated from the New York University Medical College in 1897. Urology became his specialty. Since being elected a member of the Medical Society of the City and County of Denver in 1911, he had been active in the affairs of the County and State Societies continually. Dr. Spitzer was a Fellow of the American Medical Association and a

member of the American Urological Association and the American College of Surgeons.

Dr. Spitzer had been in ill health for about a year, following a serious infection of the hand. Noted as a student, he was recognized in medical circles as one of the leading urologists of the West.

Death occurred March 17, 1933, in Colorado Springs, while the doctor was on a vacation attempting to regain his health. G. M. B.

Frank Dewey Bishop

Dr. F. Dewey Bishop of Denver died March 19 at Mercy Hospital of myocarditis following a very severe exophthalmic goiter. He was 36 years of age.

Dr. Bishop was born in Sterling, Ill., and came to Colorado when a youth. He was graduated from the University of Colorado School of Medicine in June, 1924. Prior to his study of medicine he had served with the American Expeditionary forces in the World War. He had been active in recent years in the Medical Reserve Corps. He was elected to membership in the Medical Society of the City and County of Denver in 1925, and was a Fellow of the American Medical Association. Since his graduation he had specialized in anesthetics, and had always practiced in Denver. He is survived by his wife, Elizabeth Bishop.

A. M.

Harry Lawrence Williams

Dr. Harry L. Williams died at Presbyterian Hospital, Denver, February 22, 1933. He was born in Bushnell, Illinois, November 10, 1870, and received his elementary education in Bushnell. In 1906 he was graduated in medicine from the Denver and Gross College of Medicine, and in December of the same year he opened an office in Flagler, where he practiced until his death.

He became a member of the Kit Carson Medical Society in 1919 and had been active in medical society affairs. He was also a member of the Colorado State Medical Society and the American Medical Association. Doctor Williams is survived by his widow, two sons, four brothers, and a sister, to whom the Colorado State Medical Society extends its sincere sympathy.

MEDICAL SOCIETIES

This department of Colorado Medicine is set aside for reports of recent meetings, announcements of future meetings and accounts of other important activities of the county and district societies, composing the Colorado State Medical Society. Every meeting of every local society should be reported. If your society is not represented, see that your secretary reports the next one, or that some other member is appointed to the task. Other societies want to know what your society is doing.

* * *

COLORADO OPHTHALMOLOGICAL SOCIETY January 21, 1933

DR. W. T. BRINTON, PRESIDING

Dr. B. L. Adams presented an old man with a corneal leucoma and anterior synechia from perforation of an ulcer. Drs. Wm. M. Bane, John Long, and Edna Reynolds presented a case, from the Medical School Outpatient Department, of a

marked ectropion in which the differential etiology was between exposure or pemphigus.

Drs. Wm. C. and Wm. M. Bane presented a case of glaucoma accompanying herpes zoster ophthalmicus and a case of melanosaarcoma of the ciliary body.

Dr. Maurice Marcove presented a girl that had been successfully operated upon for an astrocytoma of the third ventricle by Dr. Harvey Cushing, some intracranial abnormality having been first diagnosed by Dr. Marcove by finding a bilateral choked disc in the course of a refraction.

Dr. C. E. Sidwell presented a case of macular retinochoroiditis. Dr. G. L. Strader presented a case of vitreous opacities of unknown origin in a young man. Dr. R. W. Danielson presented a case of uneventful absorption of a traumatic cataract without resort to surgery.

Dr. Edward Jackson reported a case of melanosaarcoma of the iris in which safety demanded the sacrifice of the eyeball even though normal vision was still present. Dr. John Long reported that the conjunctival cyst shown at the last meeting proved on section to be myxofibromatous.

February 18, 1933

DR. E. B. SWERDFEGER, PRESIDING

Dr. Wm. M. Bane again presented the case of ectropion shown at the last meeting, the condition in the meantime having been successfully corrected by surgery. Drs. Wm. C. and Wm. M. Bane presented the case of a young man in whose eye free particles of pigment had been found in the anterior chamber secondary to an attack of uveitis. Drs. Bane also showed the enucleated eye and photographs of sections of the melanosaarcoma of the ciliary body presented at the last meeting.

Drs. E. B. Swerdfeger and R. W. Danielson presented a case of traumatic enophthalmos in a young man, the injured otherwise normal eye being 3 mm. farther back than the other eye.

Dr. R. W. Danielson also presented a young man who had had good results from iridectomies performed for optical and glaucoma prevention reasons in cases of oclusio and seclusio pupillae secondary to bilateral fulminating iritis.

Dr. Edward Jackson exhibited the sketch of a scintillating scotoma in ophthalmic migraine that had been drawn by the patient himself.

R. W. DANIELSON,
Secretary.

CROWLEY COUNTY

Drs. G. M. Baker and F. O. McCleary spoke at the regular meeting of the Crowley County Medical Society held in Ordway, March 8. Dr. Baker spoke on "Benefits of a Medical Society," and Dr. McCleary on "Care of the Indigent Sick." "Typhoid Fever and Its Treatment" was discussed by the members.

J. A. HIPPE,
Secretary.

* * *

DENVER COUNTY

The regular meeting of the Medical Society of the City and County of Denver was held March 7, at the Brown Palace Hotel. The Clinical and Pathological Society was host, and presented the scientific program.

Dr. R. W. Arndt presented a case of "Chronic Adhesive Pericarditis" with x-ray pictures. Dr. Herman I. Laff demonstrated on this patient a paralysis of the left vocal cord. Discussion fol-

lowed by Drs. J. N. Hall, Herman I. Laff, Henry Sewall, T. E. Carmody, and C. H. Darlow.

Dr. James J. Waring presented a case of "Ayerza's Disease," illustrated with lantern slides. Drs. E. R. Mugrage, Henry Sewall and J. G. Ryan discussed this paper.

Dr. C. F. Hegner presented a case of "Metastatic Carcinoma," with x-ray of pelvis. This case was discussed by Dr. W. W. Wasson.

Dr. J. R. Arneill presented a case for diagnosis, with history, physical signs, and x-ray pictures. Mrs. S. B. Childs, C. F. Hegner, O. M. Gilbert, T. E. Carmody, James J. Waring, and R. W. Arndt discussed the case.

Dr. John Foster, Jr., reported on two cases of "Massive Hemothorax," resulting from gun shot wound, illustrated with x-ray pictures.

Dr. Charles E. Sevier presented a report of cases of "Carcinoma of Breast," resulting in bony metastasis, illustrated with x-ray.

Following the scientific meeting refreshments were served.

One hundred and twelve members attended the meeting. The papers were of a high quality and the discussions spirited and enjoyed by all the members.

O. S. PHILPOTT,
Secretary.

* * *

EL PASO COUNTY

Dr. George W. Bancroft was the principal speaker at the regular meeting of the El Paso County Medical Society, held March 7, 1933, at the Day Nursery. Dr. Bancroft spoke on "Observations on the Treatment of General Peritonitis."

CARL S. GYDESEN,
Secretary.

* * *

FREMONT COUNTY

The Fremont County Medical Society held its regular meeting February 27, 1933, at the Municipal Building, Canon City. The Society discussed pending legislation and reported to Dr. R. E. Holmes, delegate to the Special Meeting of the House of Delegates, their opinions. A committee of three was appointed to investigate the Iowa plan and report at the next meeting.

A. BEE,
Secretary.

* * *

LARIMER COUNTY

On February 23, a special meeting of the Larimer County Medical Society was held at the Lovelander Hotel in Loveland. Dr. Maurice H. Rees of Denver was the guest speaker and discussed "Proposed Legislation Affecting the Colorado General Hospital."

The regular meeting of the Larimer County Medical Society was held March 1, 1933, at the Northern Hotel in Fort Collins. "The Iowa Plan for care of the Indigent Sick" was presented by Dr. C. E. Cooper, guest speaker.

DUANE F. HARTSHORN,
Secretary.

* * *

MESA COUNTY

Dr. A. G. Taylor of Grand Junction was the principal speaker at the regular meeting of the Mesa County Medical Society, held February 21, 1933, at the La Court Hotel. Dr. Taylor spoke on "Thoughts on Medical Organization."

V. T. DE WAR,
Reporter.

PUEBLO COUNTY

The first March meeting of the Pueblo County Medical Society was held Tuesday, March 7, at the Hotel Congress. Dr. William Senger delivered a paper on "Carcinoma of the Colon."

Dr. George Curfman of Salida was guest speaker at the second meeting, held Tuesday, March 21, at the Hotel Congress. Dr. Curfman spoke on "Osteomyelitis."

J. L. ROSENBLOOM,
Secretary.

**WESTERN BRANCH MEETING, AMERICAN
PUBLIC HEALTH ASSOCIATION
Pasadena, May 29-31, 1933**

Dr. J. L. Pomeroy, president-elect and chairman of the Committee on Meetings and Publications, announces that the next Western Branch meeting will be held in Pasadena, May 29, 30, 31. These dates will not conflict with the annual series of Canadian public health meetings in Ottawa, which will probably be the middle of June. While the dates for the Surgeon General's annual conference with state and territorial health officers, held jointly with the annual meeting of the State and Provincial Health Authorities of North America, have not been definitely set, there is a likelihood that they will be around June 5. This will enable health officers from the territories and possessions on the Pacific to come directly to the Western Branch meeting, go thence to Washington, from there to the American Medical Association meeting in Milwaukee, June 12 to 17, and thence to the National Tuberculosis Association meeting in Toronto, June 26 to 30.

**AMERICAN ASSOCIATION FOR THE STUDY
OF GOITER**

A preliminary program for the meeting of this society in Memphis, Tenn., May 15, 16, and 17, has been received. The names of many of the ablest men in the United States and Canada appear on the program.

Members of the profession in good standing are cordially invited to attend this meeting. They are also urged to join a special group sailing from New York City, July 26, to attend the International Goiter Conference to be held in Berne, Switzerland, August 10, 11, and 12. Special rates have been provided and daily programs arranged while en route to Le Havre. Those who are interested should communicate with J. R. Yung, M.D., Corresponding Secretary, Terre Haute, Ind., or S. D. Van Meter, M.D., Chairman, Denver, Colorado.

WOMAN'S AUXILIARY

DENVER

The annual dinner dance and card party of the Auxiliary to the Denver County Medical Society will be held on Saturday, April 29, at the Lake-wood Country Club. The committee, of which Mrs. Arnold Minnig is chairman, has been fortunate in setting the price at \$3.25 per couple, which is the lowest it has ever been. All members of the County Medical Society and guests are cordially invited and urged to attend.

PUEBLO

The Pueblo County Auxiliary held a meeting Monday, February 20, at the home of Mrs. J. J. Pattee. Mrs. B. Franklin Blotz, State President, discussed state work. Mrs. Maynard, chairman of Philanthropy, told of the work her committee has done and the request of the School of Defectives at Ridge for a quilting frame, lining, and batting. The Auxiliary voted to send the money for these to them. The rest of the afternoon was spent in sewing on layettes.

* * *

WELD

The Woman's Auxiliary of the Weld County Medical Society held its meeting at the home of Mrs. W. F. Spaulding, February 6, at Greeley, Colorado, with the temperature hovering at 20 degrees below zero. They were entertained by music given by five of the high school girls. After a short business meeting, Mrs. Spaulding served refreshments.

* * *

Mrs. Arthur B. McGlothlin, chairman of Program and Health Education sends the following message through the monthly news letter: "It is now time to begin preparations for celebrating May Day National Child Health Day. Since this is an approved activity for Auxiliaries, the National Health Chairman suggests that local Auxiliaries be stimulated to initiate, or participate in, community celebrations of this day wherever such participation is practicable. Plans for the celebration may be secured from the American Child Health Association, 450 Seventh Avenue, New York."

ELEVENTH ANNUAL MEETING

Milwaukee, June 12-16, 1933

Headquarters: Hotel Pfister, Milwaukee, Wis.
Preliminary Program

MONDAY, JUNE 12, 1933

12:30 p. m.—Luncheon at College Woman's Club in honor of Past Presidents, followed by National Board Meeting and visit to American Medical Association exhibits at Auditorium.

Tickets \$1.00

7:00 p. m.—Dinner for National Board, Delegates and wives of Officers and Delegates of the American Medical Association at Woman's Club of Wisconsin. Musical program furnished by artist members of Auxiliary to Medical Society of Milwaukee County.

Tickets \$1.25

TUESDAY, JUNE 13, 1933

9:00 a. m.—General Meeting, Roof Room, Hotel Pfister, Mrs. James F. Percy presiding.

12:30 p. m.—Luncheon and Bridge at the Wisconsin Club.

Tickets \$1.25

2:00 p. m.—*Attractions available for those not wishing to play bridge are Layton Art Gallery, Milwaukee Art Institute, Milwaukee Museum, Curative Work Shop and Vocational School.

or

*Bus trip to County Institutions, Milwaukee Children's Hospital Convalescent Home and Washington Park Zoo.

- 8:00 p. m.—General meeting of American Medical Association.
 10:00 p. m.—Informal dance at Wisconsin Club. Courtesy of State Medical Society of Wisconsin. Hostess: Woman's Auxiliary to the State Medical Society of Wisconsin.

WEDNESDAY, JUNE 14, 1933

- 9:00 a. m.—General Meeting, Roof Room, Hotel Pfister, Mrs. James F. Percy presiding.
 12:30 p. m.—Auxiliary luncheon, Fern Room, Hotel Pfister. Toastmistress, _____
 Guests and Speakers from the American Medical Association.
 Musical Program.
 Tickets \$1.00
 4:00 p. m.—*Teas in private residences.
 8:30 p. m.—Light opera, _____
 Tickets \$1.00

THURSDAY, JUNE 15, 1933

- 9:00 a. m.—General Meeting, Roof Room, Hotel Pfister, Mrs. James Blake presiding.
 12:00 noon—Trip to Oconomowoc Lake District. Luncheon 12:30 p. m., Carnation Milk Plant, Oconomowoc, Wisconsin, transportation and luncheon courtesy of Carnation Milk Company.
 or
 12:30 p. m.—Buffet Luncheon, Crystal Room, Hotel Pfister.
 Tickets 75c
 2:00 p. m.—*Sightseeing tour of Milwaukee.
 6:30 p. m.—"Bring your husband" dinner. Fern Room, Hotel Pfister. International-House-Cabaret.
 Tickets \$1.50
 9:00 p. m.—President's Reception and Ball, Schroeder Hotel. Hosts: The American Medical Association.

FRIDAY, JUNE 16, 1933

- 10:00 a. m.—Golf Tournament.
 All trips start from Hotel Pfister.

*Bus transportation to be paid by individuals.

MRS. ROCK SLEYSER,
 General Chairman.

Wauwatosa, Wisconsin.

We have a number of times reminded our readers that the short, snappy paper is the one that is read. The lengthy paper is the one that tires the reader. Medical journals are picked up by physicians at odd moments and the short, crisp items are read while the lengthy article gets little but a glimpse at the title. No independent medical journalist would accept and publish the long drawn out papers a state journal must perforce publish. If you wish to reach the reader, "make it short and snappy."—Nebraska State Medical Journal.

Purple Derby Receives Baptism of Fire

"Knowing that the purple derby (offered by the Knocks Hat Company to the state health officer who reports the greatest number of health officers enlisted as members of the A. P. H. A. at the next Western Branch meeting) was in the possession of Dr. A. L. Beaghler, President of the Western Branch, Dr. Kendall Emerson conducted an interesting experiment last month. It will be recalled that this hat is lined with celotex and guaranteed to absorb shocks. With the hat firmly fixed on Dr. Beaghler's brow, a gentle blow was administered by Dr. Emerson. He announced that due to budget curtailments in the parent body, funds available for Western Branch purposes would be reduced to \$300 for the fiscal year. This means the News Letter can only be issued bi-monthly instead of monthly. President Beaghler is delighted with the hat and states that he hardly felt the shock at all"—Western Branch, A. P. H. A. News Letter.

Organized medicine should supply a workable plan, safeguarding the best traditions of the profession and the fundamental practices and responsibilities of individualism in the care of the sick. If wisely considerate, such a plan will continue to promote the highest type of medical service in this country. To be successful, a plan should take into consideration the frailties of human nature existing among the devotees of our profession. It should conserve their abilities and opportunities, rewarding them according to their energy, talents, and personalities.

When the county society as a unit becomes the chief factor in organizing such a plan, then medicine will be able to surmount what can be considered the catastrophic cost to individuals and families who are unfortunately sick.—E. H. Carey, M.D., President of the American Medical Association, before the State Secretaries Conference, November 18-19, 1932.

Take this Journal home to your wife.

WYOMING SECTION

President, F. L. Beck, Cheyenne

President-elect, H. L. Harvey, Casper

Vice President, J. L. Wicks, Evanston

Secretary, Earl Whedon, Sheridan

Treasurer, Evald Olson, Meeteetse

Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne

Councillors: G. P. Johnston, Cheyenne

J. H. Goodnough, Rock Springs

F. C. Shafer, Douglas

Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

Confidence— That's the Stuff!

THE recent action of the President and Congress in passing an economy measure has restored confidence in the justice of our form of government. For several years certain powerful lobbies have had more influence with legislation than that exercised by those who really represent the whole American people. In other words—fear of certain groups has been the guiding hand in our lawmaking.

We all know that no man can get ahead in a business whose outgo for expenses exceeds the amount taken in; yet in the case of our government this overexpenditure has been going on for years at a great rate. The time has arrived for a halt. This cleaning up process is like washing a boy's dirty ears, a painful process—let's do it and have it all over soon.

The recent action of our President in the bank situation restored confidence. The reopening of our banks was attended by complete faith on the part of the American people. The American people will applaud the President and Congress again when they fully understand the unfair, dishonest, and unlawful manner in which millions of dollars have been taken from the taxpayers' pockets to use in paying unjust and unfair claims and hospital expenses for veterans' cases which had no connection with the recent war. Fear of the power of ex-service organizations has had a great deal to do in the past with the votes of Congressmen and Senators. But the tide has turned.

If we as members of the Medical Profes-

sion have not the intestinal fortitude to withstand the unfair demands on the part of the friends of those whom we examine for compensation or hospital treatment, then we are a bunch of unpatriotic cowards. If we have men among us who are being paid unjustly for so-called disabilities, we should clean our own house. Any man who is able to make a good living has no real right to ask or accept help from all the people for his own private gain. Help only should be given to those who are entitled to it and are down and out. No doctor who is able to go ahead with his regular practice is entitled to draw the taxpayers' dollars.

The recently passed bill will cut out thousands of cases of non-service connected claims. We applaud the President and Congress for the passing of this economy bill.

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Out Where the Ticks Begin

DR. ADOLPH S. RUMREICH, past Assistant Surgeon, United States Public Health Service, Washington, D. C., in the November 5, 1933, Volume 100, number 5, of the Journal of the American Medical Association, contributes an interesting article entitled "The Typhus and Rocky Mountain Spotted Fever Group." This article is worth reading and re-reading. The interesting discussion of the types known as Brill's Fever and other modifications of Endemic Typhus as seen along the Atlantic coast and the comparison of symptoms of other forms with what is now termed by McCoy as the Eastern Type of Rocky

Mountain Spotted Fever is interesting and instructive.

But the one thing which strikes us is that too little credit is given to the value of the Spencer and Parker vaccine as a prophylactic. The author only has one short sentence on the use of this vaccine—"The tick vaccine developed by Spencer and Parker confers a substantial measure of protection." Wyoming physicians who have had considerable experience during the past four or five years certainly are great believers in the value of this vaccine. Ye Editor, who has personally vaccinated about 1500 people exposed to a virulent type, so far has only seen one case following the use of this vaccine. This person only had one 2 c.c. vaccination and because his arm was swollen he refused to take the required second vaccination. About three weeks after the first vaccination he changed his work to an adjoining ranch and there came down with a very mild form of Rocky Mountain Spotted Fever. He was in the hospital for only a few days, and we believe that the one 2 c.c. dose so modified the disease that it saved his life. That there is real value in the Spencer and Parker vaccine we firmly believe, and this is the honest opinion of all Wyoming, Montana, Idaho, Utah, and Colorado physicians with whom we have discussed the matter. Every doctor in Wyoming should learn all he can about Rocky Mountain Spotted Fever, its prevention and treatment. There is no use for us, like the ostrich, to hide our heads in the sands of indifference. We must face the music and meet conditions as they exist. Some advocate a "soft pedaling" because they fear loss of tourist business if the real truths about Spotted Fever are told—better by far that we lose some tourist business rather than the lives of our own citizens. One real citizen is worth a dozen "tin-lizzie" tourists.

It is hoped that the State Board of Health of Wyoming will be able to aid the people of Wyoming to understand and use this life-saving vaccine. We also hope to see the day when Wyoming people will use to the last drop their quota of the vaccine produced by the United States Public Health Service.

The Recent Legislature

MEDICAL affairs in the past session of the Wyoming legislature were looked after in the Senate by Dr. R. H. Sanders of Rock Springs. Dr. J. L. Wicks of Evanston and Dr. J. F. Replogle of Lander worked faithfully in the House of Representatives. To this list ought to be added the name of Dr. J. L. Hunt of Lander, a dentist, who also aided in securing laws that improve the health condition of Wyoming.

Senate File Number Six corrected an error in our medical practice act. This law had been on the statute books for over thirty years—yet in no place did it say "a doctor must have a license to practice medicine in the State of Wyoming." It only required that any one wishing to practice medicine in Wyoming "should apply for a license." Senate File Number Six corrects this error and puts teeth in the old law. It was passed and signed by Governor Miller. The passage of this law will now enable the State Board of Medical Examiners to see that the law is enforced, and it marks the completion of a program to correct the weak part of our medical law.

It called for a real sacrifice on the part of Doctor Sanders, Wicks, and Replogle to give up forty days and forty nights of their busy lives to accomplish what they did. The people of Wyoming and the members of the medical profession acknowledge their gratitude to these men.

Senate File 101 by H. H. Schwartz amended and re-enacted Sec. 29-1003 creating a Board of Trustees of County Memorial Hospitals and prescribing the duties and powers of said Board. The chief point in the bill is to provide protection to the members of the Board. It reads "no individual member of the Board of Trustees shall be personally liable for any action or procedure of the Board as a corporate body if such member acted in good faith and without negligence." This bill extends to the Board of Trustees of a hospital the same protection that is given to trustees of corporations.

A law was also passed making it a legal

requirement that the state Board of Medical Examiners shall have one osteopath as a member. For years there has been a gentlemen's agreement to this effect and one member has been an osteopath. This law was supported by the doctors to show good faith, and the Governor has appointed an osteopath, Dr. Tarrant of Laramie, as a member.

A bill was introduced to amend the present law on marriage to require the female also to be examined and have a doctor's certificate of freedom from venereal disease, as is now required of the male before a license to marry could be issued. The Committee on Public Policy and Legislation recommend that such a law be passed or the old law repealed. The legislature killed the new bill, so we are still operating under the clean male and unclean female law as of old. We fail to see the justice of such a one-sided law. The fine sentiment of chivalry must have been the real reason why this law was killed. However, had the law-makers all been doctors the law would have been passed, because doctors have seen some unclean things in life.

Next month we hope to continue the review of the acts of the past legislature and refer to some other bills that were introduced and killed. Taken as a whole the past session was one of the best sessions we have seen for several years so far as good honest work and honest effort to cut down the expenses of State Government. The day is here when we as individuals must live within our income and the state of Wyoming must do the same. We as members of the medical profession feel proud of the men who represented our profession in the past session of the legislature—Doctors R. H. Sanders, J. L. Wicks, and J. F. Replogle.

Doctors in the front line trenches need every support that can be mustered to help them in deciding against giving up their private practices and becoming employees of non-medical profit seeking groups.—Bulletin of the Wayne County Medical Society, Detroit.

Ultraviolet as an Antiseptic

That short wave ultraviolet radiation in the vicinity of 2500 Angstrom units has a potential use as an antiseptic is demonstrated clearly and simply in a microscopic moving picture of paramaecium cells subjected to irradiations from a "thin window" ultraviolet lamp, the film being produced under the supervision of Dr. Harvey C. Rentschler, Director of Research of the Westinghouse Lamp Company, Bloomfield, New Jersey.

To make this unique picture, a drop of water, containing paramaecium cells was placed under a microscope to provide the "location." In the picture the paramaecium, which is one of the highest forms of single cell organisms, moves about with great rapidity before irradiated with ultraviolet.

When first subjected to the ultraviolet rays, the cells move even faster. Then they begin to slow up gradually and soon become paralyzed and motionless. At this state of their reaction, blisters begin to form on the outside surfaces of the cells which at the same time become shorter and fatter. Soon they burst open and disintegrate into the water.

Although about five minutes are necessary to destroy paramaecium cells, typhoid and scarlet fever germs, for example, die in a few seconds when subjected to these short ultraviolet rays. Paramaecium cells, instead of germs, were selected as subjects for the moving picture because their reactions and physical changes under the influence of the short ultraviolet are more readily visible.

Already ultraviolet rays are being used in the medical field today for the germicidal treatment of skin diseases, many of which are caused by germs. Regular irradiation of the diseased area soon destroys the germs and accelerates the cure.

Only an occasional physician has undergone the voluntary discipline needed to make an acceptable writer, as judged by the standards of those who live by writing.—Medical Annals of District of Columbia, Washington, D. C.

Take this Journal home to your wife.

TUBERCULOSIS ABSTRACTS

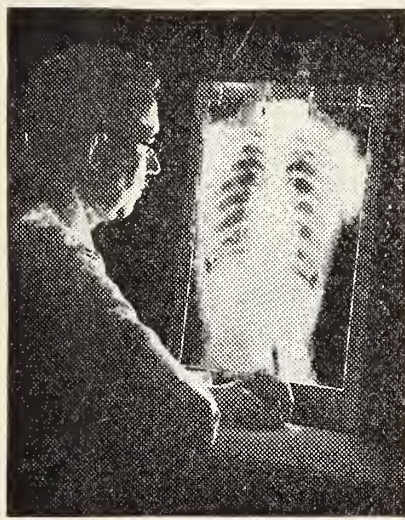
A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Vol. VI

April, 1933

No. 4



FROM WHOM DID HE GET IT?
TO WHOM HAS HE GIVEN IT?

THE modern physician appreciates that whenever a case of tuberculosis is discovered every contact should be examined. To support him in this practice tuberculosis associations throughout the country are this year striving to focus public attention, through the medium of an educational campaign, on the communicability of tuberculosis. The slogan is, "Tuberculosis—From whom did he get it—To whom has he given it—Examine and protect every contact." Incorporated with these words is an illustration showing a doctor examining an X-ray plate to suggest also the necessity of relying on this instrument of precision for making the diagnosis. One of the active crusaders of this educational movement is J. Arthur Myers of the Department of Preventive Medicine and Internal Medicine, University of Minnesota. Space permits only a few quotations from his William Snow Miller lecture, bearing on the communicability of tuberculosis.

EXAMINING TUBERCULOSIS CONTACTS

The slogan of last year's tuberculosis educational campaign, "Tuberculosis causes tuberculosis—every case comes from another," tells the whole story, namely, that tuberculosis is a communicable disease. (The 1933 slogan is a repetition, with slight modification, of the same idea.) The recognition of this fact has done more to change conditions with respect to the incidence of tuberculosis than all of the steps that have been taken toward the control of this disease. The unfortunate fact remains that, although we have known the disease to be communicable, we have not always used this knowledge in the expenditure of funds and in the dissemination of publicity intended for tuberculosis control.

* * * * *

Now that we have been compelled to learn a good part of our tuberculosis over again, we are visualizing its control as never before. Optimism is being expressed everywhere by those who have carefully followed the recent developments in our knowledge of tuberculosis. The following prac-

tical applications of the recent developments give us an idea of what is possible and justify much optimism:

Dr. Hilleboe became curious about the tuberculosis status of 60 children four years old and under who were enrolled in a nursery school. He applied the intracutaneous tuberculin test and found that four of them were positive reactors. Since every case comes from another, he began searching among their associates. An early revelation was that two of the teachers had tuberculosis, one definitely of the adult type. Members of the families of these children are now being studied for tuberculosis. Finding the source and ending the exposure is the best treatment for the children. Treatment of the patients who infected the children may begin much earlier than it would have without such an investigation, and such treatment should be the means of saving large numbers of other persons from unsuspected exposure.

Simons and Hilleboe applied tuberculin tests and X-ray examinations in a case-finding endeavor in

a small rural community with the result that 19 new cases of tuberculosis were discovered. When they enlisted the support of the veterinarians 18 cows supplying milk to the community were found to be infected. Gibbons has done similar work in another rural community. If their work is continued, and tuberculin-testing is more generally applied to the children of the community at six- to twelve-month intervals, the time will be near at hand when the advanced case of tuberculosis will no longer be found in the community and when tuberculosis in any stage will be a rare disease.

Overcoming Diagnostic Difficulties

There have been two stumbling blocks in our present program of tuberculin-testing and X-ray examinations of positive reactors as a case-finding measure. The first is the objection presented by parents and others to instrumentation in the administration of tuberculin. In the hands of most workers the Moro test has not proved as accurate as the Pirquet test. However, Lovett has called attention to the percutaneous test, which consists of rubbing the skin with ether until hyperemia appears, in an attempt to remove the oil from the pores. Then a preparation containing tuberculin is rubbed into this area of skin. She finds this test fully as accurate as the Pirquet test but not as accurate as the Mantoux (intracutaneous) test.

The second stumbling block has been the cost of X-ray films. If one wished to make a tuberculosis inventory of 25,000 school children or 10,000 university students, the cost of the X-ray films alone was stupendous. As an example of the attempt to solve this difficulty may be cited the experiment of the Queensboro Tuberculosis and Health Association which stimulated a manufacturer to develop a paper X-ray film on rolls. With the special equipment devised it is possible to make a thousand chest exposures in a single day with one machine.

In applying this case-finding method to university students, Diehl calls attention to examinations of 2,500 entering students in the fall of 1931. Among approximately 800 reacting positively to tuberculin and having X-ray-film examinations of the chest were found 15 cases of adult type of pulmonary tuberculosis in addition to many cases of pleurisy and childhood type of tuberculosis. One of the cases with adult type of pulmonary had advanced disease, five were moderately advanced, and nine were minimal. The control of these cases with reference to dissemination of tu-

bercle bacilli on the campus, as well as individual treatment of the cases, is a service worth much more than it costs the institution and the student body. The fact that more than a half-dozen great American universities instituted similar tuberculosis-finding procedures in the fall of 1931 is of great significance.

Sanatoria are beginning to employ full-time epidemiologists, whose duty it is to work with family physicians of patients admitted to their institutions in finding the source of their patient's disease. Moreover, they place under examination and observation those persons who have been in contact with their patient. This procedure at the Minnesota State Sanatorium is proving very effective.

Collapse Therapy a Preventive Measure

Recent advances in collapse therapy are doing great good for individual patients, but a greater good by closing off lesions which otherwise would be sources of exposure to vast numbers of people. The discovery of the fact that many patients may remain ambulatory while artificial pneumothorax is being induced, or soon afterward, promises to do much to relieve congestion in rooms, wards, and hospitals for tuberculosis patients, to relieve the patient of economic strain, to relieve the taxpayer of a considerable burden and to prevent the spread of tuberculosis. The chief problem is one of finding cases suitable for such treatment, that is, before the disease has become extensive and there is much breaking down of tissues. Past experience has taught us that unless such case-finding methods are used in order to detect the disease in the earliest possible state, many are too advanced to respond well to any form of treatment. Therefore, we must not wait for patients to come to us with complaints, but must go out and find them months and even years before they would develop symptoms.

A summation of the facts of tuberculosis now at hand points to prevention of the initial and all subsequent infections as the goal for which we must strive. This means that pressure must be brought to bear on all the modes of attack on tuberculosis now in existence, so that each will function at the highest possible efficiency. The principal methods are all based on case-finding, so that the source of exposure may be stopped.

Recent Developments in Our Knowledge of Tuberculosis, J. Arthur Myers, Am. Rev. of Tuberc., Feb., 1933.

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C. F. Kemper, M.D., *Chairman*
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W. H. Crisp, M.D.

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EDITORIAL NOTES AND COMMENT

*The Way of Health Insurance**

UNDOUBTEDLY our best compilation of facts upon the subject of health or sickness insurance (the terms are interchangeable) is in the book "The Way of Health Insurance," by A. M. Simons and Nathan Sinai. In view of the extensive detail therein, it is our purpose to discuss the book and draw a few conclusions—inasmuch as these items will define the subject, delineate its principles as demonstrated particularly in various foreign nations, and introduce the question, "Should the United States adopt compulsory health insurance for the protection of its low-income classes?"

Let us first differentiate health insurance from social insurance. The latter is the broader term; it includes unemployment insurance, widow's pensions, old age pensions, the dole. The term health or sickness insurance is, therefore, a subdivision of social insurance.

The majority of us visualize health insurance as a quicksand, inexorably stifling professional individualism, initiative, and pride. Thus has been prevented a calm discussion of the subject and created a directionless flight from the fearful fate. Others see it as a panacea for our unsatisfactory economic situation.

Health insurance is a method of distributing the burden of sickness among the lower-paid strata of society. Continued contributions of the insured plus those of em-

ployers and the state are accumulated and distributed to the sick either in cash or service, or both. It is not state medicine, since the professional men involved are not government employees; administration is not by government officials; and its main support is not through taxation. The sick individual is relieved of loss of earnings and cost of medical care without crushing the many. The scheme has been adapted in some form by the majority of modern nations. The proportions of the funds supplied by individual, employer, and state vary widely. Though governmental power is used to enforce collections of contributions, few governments undertake their care and distribution. This phase is more often the work of self-governing organizations of the insured. The cash benefit is usually a percentage, also variable, of the previous wage. Aside from the standard regulations, nearly every system has numerous provisions for additional benefits. Such may be family, dental, ophthalmological, convalescent, and special services.

The physicians or dentists receive remuneration through one of the following means: Payment may be made for each "medical act" on the basis of an adopted fee schedule; a "capitation" fee may provide a certain sum per year per member for certain services; the professional man may receive a definite salary upon either a part-time or a full-time basis. One or more of these methods may obtain in one country.

The so-called "voluntary" sick benefits of unions, lodges, and industrial concerns have lacked the resources, inclusiveness, and sta-

*Presented by the Editor before the Medical Economics Conference of the Denver County Medical Society, April 30, 1933.

bility to meet the problem. Success rests upon "compulsory" insurance—small payments enforced at regular short intervals. The power of the state is needed, plus the required reinforcement of funds through employers or taxation.

Owing to constant pressure to extend the scope of the benefits, the number and classification of the insured usually continues to grow. The highest annual income limit within which a worker is insurable on the continent so far is \$1,600. Most are under \$1,000—which in the United States is rated as frank charity. The basic patterns of the systems are similar, but there is great diversity in details. The differences are of interest only as they affect the public, the patients, and the practitioners involved. The operation then, rather than the machinery, is our concern.

"No report can rise above the level of the facts upon which it is based, the method of their selection, and the fairness of their interpretation." Never did this fact apply more aptly than in the study of health insurance—there being such varied interests at stake. Every phase of its administration is a subject of sharp disagreement. Therein lies the lack of satisfaction with health insurance. There is jealousy among the units of the administration. It is complicated by the association of other divisions of social insurance and the many problems incidental to them. Health insurance should be a separate and distinct branch of social insurance, in no way related to the administration of unemployment, pensions, and its other branches.

There is no lack of printed material, but of the thousands of titles, there are few without strong bias. Some avoid the many human reactions; others champion a single faction. The facts are not falsified; they are merely carefully selected. The main sources of information are as follows:

1. Official government reports. The officials, as officials do, vacillate according to changing political forces and strategy. They are not acutely critical of their own work. Some investigations by commissions end up, as we have noted, with majority

and minority reports—a little dissenting individual comment thrown in.

2. Publications of insurance funds or societies. Such organizations have three chief expense items: cash payments for invalidity, medical fees, and cost of pharmaceuticals. To them, therefore, the most vital problems are financial. Physicians issue the certificates of invalidity, receive fees directly, and write the prescriptions. Thus independent individuals are responsible for the expenditures of the institution. On this peculiar situation lie some of the greatest problems of health insurance. The reports of the administration aim to make "a good showing". The best "selling points" and alleged superiorities over other systems are emphasized. They imply we are too highly paid, too free in certifying claims, too liberal in prescribing. They tend to unload their sins upon the profession "goat"—the medical profession.

3. Publications of the medical professions. In countries where health insurance systems prevail, 40 to 80 per cent of all qualified medical work is done for the insured population and according to insurance regulations. Note herein the contrast with the situation in the United States where it is estimated only the highest-paid 20 per cent receive adequate dental care, and physicians receive a majority of their income from this element. Reactions to changes thus wrought dominate professional expressions on the system. There is a natural revolt against change. The remuneration is a result of public appeals, arguments, or political influence rather than of personal arrangements with patients. Professional statements reflect these differences. Doctors in direct pay from funds will tend to share the attitude of the insurance societies or the government officials.

4. Discussions and treatises. These are easily written. One may choose the country, the time, and the source of information to prove almost any contention. Descriptions of the formal structures of insurance reveal almost nothing of fundamental human relations and reactions which dominate the operation of any system and which are para-

mount in determining its desirability as a social institution.

The important thing for us is not to yield to the bias of the sources. The authors of the book we are considering have named the sources of information so that it may be interpreted in proper light. Considerable is based upon interviews with government and insurance officials, direct observation of clinics, hospitals, individual professional offices, and official headquarters. Phenomena were analysed from as many angles as possible, thereby eliminating errors. Is the phenomenon common to other system of insurance? Was it present before insurance in that country? Is it found in the United States? Thus this country is made a "control" in checking conditions in other countries where insurance prevails.

Insurance itself alters the incidence of reported sickness. Insurance systems have always increased the number of sick days reported. Neuroses and malingering are undoubtedly the chief factors in this change. Sickness is the most imperfect of insurance risks. The will to get well is impaired during industrial stress, especially in the face of a cash reward for sickness. Again, there is no standard amount of treatment, disability, or time element in morbidity.

The constituents of the problem are not static; medical science is too progressive. Principles of an insurance plan applicable at this time would be partly or wholly antedated in another decade.

The fact remains, however, that there is the desirability, if not the necessity, of distributing the payment for medical service, among those unable to meet it, over a large element of people and a long period of time. The prevention and cure of disease in this element must be kept distinct from the relief of poverty. None but the medical profession can determine the amount and character of medical treatment. The profession's intelligent leadership will minimize criticism and loss of confidence by the people. It will always be the essential factor. Many existing defects in prevailing insurance plans are the direct result of the unwillingness of medical men to assume the role of informed leaders in the movement.

In other words, the evils decrease as the responsibilities, powers, and duties are intrusted to the medical profession. Also, the system is more satisfactory as cash benefits are more segregated from medical service.

It should not be our purpose to defend or attack health insurance. Knowing that any such health program will develop from many experiments, it would be presumptuous to attempt the outlining, in any detail, such a plan for the United States. A few positive facts from abroad should dispel some of the imaginary fears harbored by those of us who are not too fully informed upon this subject, or are prejudiced: The opposition and criticism of plans in force are not of the whole system but are directed toward details of comparatively minor importance. There is practically unanimous agreement that the insured persons are receiving better medical care than before institution of the insurance. Professional incomes now average higher in working-class practice than before insurance; there is more professional work and more pay.

In conclusion, to assist this country to institute a workable plan toward supplying adequate medical care for the more poorly paid American people, could not the medical profession advocate for trial a system constructed upon the following backbone:

1. Participation in the program voluntary, part time, or full time for regular qualified physicians. We must recognize that this principle has already been accepted in voluntary insurance systems—lodges, industrial plants, and schools. The same obtains in many compulsory employers' liability plans. Practically every physician who can obtain such work is now participating in one or more of these activities.

2. Participation compulsory for people within certain low income limits, the scale varying with the number of dependents. This would amount to a substitute for most of our present medical charity.

3. Preventive medicine among the insured entirely within the control of health officers and boards of health.

4. Enrollment and payment of premiums under compulsory statutory supervision of the state.

5. Financial management by a committee representing the interests involved—namely the state, the various associations of the insured, and the physicians.

6. Medical fees to be entirely distinct from old age pensions, unemployment insurance, and cash benefits—the latter items not to be a part of health insurance and to be separately managed if they prevail.

7. Medical boards composed of physicians elected by their colleagues participating in this form of service to determine, within reasonable limits, standardization of fees and limitations of service. The same or similar boards to have disciplinary powers to prevent abuse of the system and assure the necessary cooperation of the profession, insurance organizations, and the state.



"Age Cannot Wither Nor Custom Stale"

DR. J. N. HALL celebrates his fiftieth anniversary of practice in Colorado.

April fifth was not just another Wednesday for Dr. Hall; on that day he witnessed the completion of half a century of practice in this state.

To few, indeed, in a profession demanding such sustained effort, is given the privilege of looking back from the heights of notable achievement over the entire golden age of medicine.

In extending its felicitations to the genial Hall on this happy occasion, Colorado Medicine joins with his friends, both in and out of the profession, in wishing for him continued good health and many more years of active service in the field he has so signally adorned.



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CORRESPONDENCE



To Colleagues in Colorado and Wyoming:

The season of the year is rapidly approaching when those who are susceptible will begin to worry over the prospect of ivy poisoning. Knowing these worries may be overcome, may I pass the information on?

Many of my boyhood days were spent on an island in the Platte river in eastern Nebraska. For many years the chief summer worry of the family was ivy poisoning, as my father and brother were susceptible.

I have seen my brother's face so swollen that he was unable to see and with the total obscuring of his features so that he resembled anything but a human being.

About 1902, having just finished school, with beginners luck I chanced on the following: I had heard that chewing the leaves of the plant acted as a preventive, hence decided taking the tincture would be more simple for the patient. Both my father and brother were given two drops of the tincture in water daily, beginning before the plants were up in the spring and continuing into the summer. From that time on until the place was sold they had no more trouble.

The place has again returned to them and among their first plans is a four-ounce bottle of Tincture of Rhus Toxicodendron.

LOWELL LITTLE, M.D.

Fort Collins.

PNEUMONIA IN CHILDHOOD*

ISAAC A. ABT
CHICAGO

Pneumonia is one of the most frequent diseases of infancy and presents a series of unsolved problems. Broncho-pneumonia is most frequently encountered during young life. It occurs from the sixth month and reaches its maximum at the end of the first or second year and tends to become less frequent at the fifth or sixth year.

Lobar pneumonia is relatively rare before the second year, though it may occur with greater frequency than has been supposed. McNeil, MacGregor and W. Alexander state that lobar pneumonia is rare because it is comparatively seldom seen in the post-mortem room of the Children's Hospital. In uncomplicated cases the mortality is low. The statistics of 945 autopsies of all deaths from all diseases at the Royal Edinburgh Hospital for Sick Children show that in 1922 to 1928, 2.5 per cent were lobar pneumonia and 14.8 per cent were broncho-pneumonia. The age distribution of lobar pneumonia varied from four months to four years. More than three-fourths of all the cases were in children under two years of age.

St. Engel is also of the opinion that lobar pneumonias during the first year are not as infrequent as has been supposed. He believes that this has been confirmed by the course of the disease, the critical termination of the fever, and the x-ray examination.

Before the sixth month of life, the secondary pneumonias are of most frequent occurrence. They result after a previous nutritional or alimentary disturbance and are preceded by congestive processes in the lung. During the first month of life the aspiration pneumonias are of comparatively the investigation of Loeschke, Ribadeau-Dumas, and others. A pneumonia may originate primarily as the result of aspiration; frequent occurrence, as has been shown by eventually infection may take place and the clinical manifestations may be similar to that

which usually occurs in the infectious pneumonia.

The question why infants are more frequently attacked by broncho-pneumonia than lobar pneumonia, has been studied by Lauche. He believes that lobar pneumonia may develop in infants who have been sensitized to the protein of the pneumococcus. He is of the opinion that those infants may fall ill with croupous pneumonia, who have recovered from one or more mild pneumococcus infections, and in this way have been sensitized. In support of this hypothesis, Lauche studied nine cases of croupous pneumonia in the new-born and found that all of the mothers had been ill during their pregnancy with croupous pneumonia. He concludes, therefore, that the hyperergic reaction was transmitted from mother to child through the placenta.

Symptomatology

In considering the symptomatology of the pneumonias of childhood it is evident that one must follow some system of classification. The elementary pathological studies of pneumonia make two main divisions, the lobar and the broncho-pneumonic types.

Broncho-pneumonia occurs during the period of infancy. Lobar pneumonia, though it does occur, is relatively infrequent, is marked by a sudden onset, usually by a critical termination and in the majority of cases by a benign course. It occurs with the greatest frequency after the second year of life.

Engel maintains, on the basis of the course of the disease, temperature curve, and the roentgenologic examination that lobar pneumonias occur more frequently than is commonly thought. He points out that the mortality rate of lobar pneumonia in young childhood is low and, conversely, broncho-pneumonia runs a more unfavorable course, and there is more frequent opportunity to study it at autopsy.

The broncho-pneumonias during the period of infancy require the most serious attention and thoughtful study. After the

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932. Dr. Abt is Professor of Pediatrics at Northwestern University. The Rocky Mountain Pediatric Society sponsored his presence at this meeting.

sixth month of life the secondary pneumonic processes are most common. They occur in severe nutritional disturbances due to some congestive process in the lung. During the first month of life the aspiration pneumonias are most frequently met with. The most common bacteriologic finding in all types of pneumonia occurring during childhood is the pneumococcus, more seldom the streptococcus. This has been proved by puncture of the lung during life. On postmortem examination other organisms are found, such as streptococci, influenza bacilli, and diphtheria bacilli. It has been stated on the basis of bacteriologic studies that 88 per cent of all forms of pneumonia in infancy are due to pneumococci. The organisms which are found in the pharynx are varied and numerous, but do not necessarily correspond in type or morphology with those found in the lung tissue of pneumonia patients.

The table of Heim, Kramar, and Gyüry presents the comparative incidence of the different types of pneumococci in healthy individuals and children suffering from pneumonia.

	Type I	Type II	Type III	Type IV
Healthy Individuals	6.8%	18.2	28.1	52.9
Pneumonic Patients,				
Adults and Children	54.5%	18.1	18.2	12.1
Children under 2 years				
with pneumonia	8.3%	16.7	25.0	50.0
Children over 2 years				
with pneumonia	57.0%	28.0	0.8	14.2

It might be thought that this etiologic knowledge should form the basis of a classification of the broncho-pneumonias of childhood, but the streptococcal and staphylococcal infections do not produce a type of clinical pneumonia which can be differentiated from the various forms of pneumococcus pneumonia. If this be true, then it is evident that an etiologic grouping on a bacteriologic basis is not feasible.

To resume the question of classification we will confine ourselves to a consideration of the broncho-pneumonias of infancy. From the standpoint of prognosis, treatment, and clinical instruction the most useful classification is based on the clinical manifestations and bedside observations.

The older authors divided broncho-pneu-

monia into two types, the acute and the chronic. The French authors make five divisions: (1) the mild; (2) the moderately severe; (3) the severe; (4) the chronic broncho-pneumonia; (5) the cachectic type.

It will be recalled that Holt and Howland divide the broncho-pneumonias into: (1) the acute congestive type; (2) the acute disseminated (capillary bronchitis); (3) lobular pneumonia of the common type; (4) the protracted form.

St. Engel considers three groups: (1) the moderately severe lobular type; (2) the severe lobular pneumonias, particularly such as occur after infectious diseases; (3) the more septic forms, which rapidly involve the serous membranes and lead to empyema.

Finkelstein distinguishes: (1) a slowly developing broncho-pneumonia; (2) a severe type running a rapid course, particularly in young infants under three months of age; (3) a type with a sudden onset resembling croupous pneumonia in its origin and course, (any one of these three types Finkelstein thinks may be associated with symptoms such as asthmatic breathing, spasm of the bronchi, tendency to asphyxia, cerebral and intestinal manifestations); (4) the grippal pneumonias of premature and delicate infants, also spoken of as asthenic pneumonia; (5) pneumonias characterized by the formation of abscesses.

Perhaps the most useful and most inclusive clinical classification which has been suggested is the one which Erich Nassau proposed.

Types of Broncho-Pneumonia

Nassau and Meyer

- (1) Pulmonary Form.
- (2) Cardio-vascular Form.
- (3) Atonic Form.
- (4) Intestinal or Alimentary Form.
- (5) Meningeal or Eclamptic Form.
- (6) Toxic or Septic Form. Not invariable—many combinations possible.
- (7) Asthenic Pneumonia.
- (8) Sub-acute asphyctic type of young infants.

Pulmonary Form

In this type the pulmonary symptoms predominate, and while other organs may be involved, difficulties of respiration are most

marked. The onset of this type of the disease is not severe. At first the patient does not give the impression of being severely ill; fever is for the most part high and lasts, as a rule, for six to nine days. The color of the patient is good, though there may be a slight cyanosis of lips, fingers, and toes. The skin is not cool or pale, and the turgor remains normal. There may be edema of the chest wall, which is an early symptom in broncho-pneumonia. The muscle tonus remains intact, the abdominal wall remains tense, because the cardiovascular system is not involved. Ordinarily this type runs a uniform course. The heart as shown in the x-ray picture may be distended and frequently dilated to the right, indicating congestion in the pulmonary circulation. Walgren called attention to the displacement of the heart in unilateral pneumonia of children. He found that the heart was temporarily displaced toward the affected side. J. P. C. Griffith has also observed that there is a cardiac displacement toward the affected side and a high position of the diaphragm on that side. X-ray studies showed that at the time of resolution or shortly afterward, the heart resumed its normal position. If the pneumonic process is protracted the return of the heart is delayed as well. In most of the cases observed the pneumonia was of a croupous type. The occurrence of the displacement has been thought by Thones and Walgren to be due to a distension of the unaffected lung. This subject has added interest because a similar displacement is known to occur in massive collapse of the lung.

The inflammatory area in the pulmonary type of broncho-pneumonia is usually diffuse; several lobes are involved. Small pleural exudates with fibrin deposits are almost constantly present. Dyspnea, disturbing irritating or loud barking cough, restlessness, and crying are frequent. The desire for food may remain undisturbed, though it may diminish when the effort of drinking causes difficult breathing and coughing. The weight remains stationary or increases very slightly. The gastro-intestinal function is not frequently affected.

The disease seems to be confined to the lungs. The efficient work of the heart, muscles, and the diaphragm, compensate for the disabled respiratory function. If the course of the disease should be unfavorable, cyanosis and meteorism may occur, though the abdominal muscles continue to be tense. Dyspnea occurs with a falling blood pressure and the pneumonia may merge into one of the severer types to be described later. Under such circumstances the face assumes an anxious expression, the fever increases, and the child may expire. Usually, death occurs after a long illness—not during the first days. The patient may apparently recover, though a relapse caused by new areas of inflammation leads to a more severe attack which terminates fatally.

The pulmonary form of broncho-pneumonia resembles in many respects the lobar type of older children. In general, the prognosis in this form is comparatively favorable.

Cardio-Vascular Form

The cardio-vascular form stands almost in direct contrast to the type just described. It is characterized by cardiac and vascular failure. In the very first days of the illness, these patients are cyanotic and have an anxious expression. Very shortly marked dyspnea is observed, though there is insufficient evidence of pulmonary involvement. Obviously the condition depends upon cardio-vascular involvement. Again dilatation of the alae nasi is observed, as well as deep retraction of the lower portion of the thorax, grunting breathing, increased dyspnea and sometimes a short cough. Striking symptoms are restlessness and anxiety. Almost at the onset meteorism is present. The superficial veins of the abdomen are dilated. The liver and spleen may be palpable and enlarged as a result of splanchnic congestion. The blood pressure is low or sinks rapidly, the pulse is soft, the heart's action is rapid, and as the disease progresses cardiac irregularities occur.

Periods of bradycardia indicate the disturbances of cardiac effort. The heart tones become muffled. The x-ray shows that the heart is enlarged. If the vaso-motor centers

become affected, there is a continuous change in the appearance of the patients. The skin takes on a greyish hue, or at times it assumes a marked pallor, this color may again be replaced by a cyanotic hue, which increases to the point of asphyxia. At any moment the patient is in danger of collapse. The nutrition suffers; while the child may grasp the bottle eagerly, possibly take a few sips, the distressing air hunger renders further sucking impossible. Briefly then it may be said that the cardiac or vascular form of broncho-pneumonia is, for the most part, an expression of disturbed function of the heart and the vascular system.

As a result of the severe congestion, a marked degree of air hunger occurs. It has been suggested that disorders in the innervation of the vessels and heart may be the factors which produce this variant form of pneumonia in children. It must also be taken into account that the toxin of the pneumococcus may directly damage the cardio-vascular system.

Atonic Form

In many respects this form resembles the cardiac type, though the vascular failure seems to exert the greatest influence in the production of atony.

At the onset of the disease the skeletal muscles show loss of tone. The arms and legs are flaccid, as if paralyzed. The abdominal wall is readily compressible, and the coils of intestines may be palpated. It is true that meteorism may occur, though it never takes on the extreme severity which occurs in the cardiac form. The diaphragm is affected, as well as other muscles. As a consequence of the atony of the diaphragm, the liver descends and may be readily palpated. The patients are quiet and move but little; the blood pressure is always low. The falling blood pressure indicates a loss of tonus.

In children, as in adults, the determination of blood-pressure is an accurate index of integrity of circulatory conditions. The pressure observation should be taken daily at about the same hour each day. A maintained pressure is a favorable sign, while

a low or falling blood pressure indicates unfavorable progress of the disease.

If the muscle tone is not increased or improved, these patients die after a brief period without marked terminal symptoms. The course of this type is characterized by marked asthenia, muscular relaxation, psychic weariness, and fatigue.

Alimentary Form

The onset of this form of broncho-pneumonia differs from those which have been mentioned previously. In this group loss of weight, diarrhea, vomiting, and other alimentary symptoms attract immediate attention. Some time elapses before the pulmonary involvement is suspected. The loss in weight is the most striking prodromal symptom. Severe general disturbance indicates the pulmonary nature of the disease.

The skin assumes a greyish-hue. Occasionally a mild degree of coma occurs. Moderate tympany may be present. It is obvious that a differential diagnosis between this form of broncho-pneumonia and alimentary intoxication may present the greatest difficulties. In any event the appropriate dietary treatment for the alimentary symptoms should be instituted promptly and early. In this way the alimentary aspect of the disease may subside, and the pulmonary involvement may be recognized.

Meningeal and Eclamptic Form

In the meningeal form the existence of meningitis is readily suggested; such symptoms as rigidity of the neck, opisthotonus, rigidity of the extremities, spasm of the muscles of the eyelids and mouth, and general convulsions may occur. Occasionally there is paralysis of muscle groups. The reflexes are usually normal. The pressure of the spinal fluid may be slightly increased. The fluid is clear; the globulin tests are negative; sugar is usually present; the cells as a rule are not increased. Unconsciousness may last from five to seven days. Consciousness may return several days before the defervescence of the fever. In the unfavorable cases patients become pale, muscles hypotonic; tympany and low blood pressure are terminal symptoms.

The eclamptic form is characterized by

recurring spasms. Many of the patients constituting the eclamptic type showed evidence that spasmophilia was converted into a manifest tetany during the pneumonic attacks.

Toxic or Septic

This type is characterized by the acute and fulminating onset. In the midst of perfect health without previous fever the patient in a few hours becomes profoundly ill and goes into collapse.

The onset is characterized by restlessness, great anxiety, cyanosis or a grey color of the skin. The fever is immediately high, 105° or above, though occasionally the patients are afebrile. Unconsciousness at the onset is not the rule; the patients appear to suffer pain. Breathing is superficial, pulse not to be felt, blood pressure low. Muscular hypotonia is observed. The extremities seem paralytic and there is a high degree of meteorism, as a rule. The heart is dilated and symptoms of cardiac and vascular failure occur in a few hours. Edema and congestion may develop; convulsions and coma may be terminal symptoms. Paracentesis of the chest shows a seropurulent exudate. In some cases the necropsy shows a fresh broncho-pneumonia with congestion, emphysema, and purulent bronchiolitis. In a large number of patients one observes pin-point to pea-sized abscesses; upon opening these softened areas it is noted they are filled with a green, thick pus. It is assumed that these pneumonias are of hematogenous origin. The course of this form of broncho-pneumonia seldom lasts longer than forty-eight hours; it frequently occurs in infant asylums and hospitals.

Mixed forms of the types that have just been described may occur; thus a cardio-vascular type may be associated with hypotonia, or the alimentary type with a cardio-vascular or atonic type.

Richard Grosser attempts to simplify Nassau's classification. He divides broncho-pneumonia into two main groups based upon clinical observations, supported by bacteriologic and autopsy findings:

(1) Localized pneumonia without general infection.

(2) Pallid Pneumonia. (He gives this designation because of the pale appearance of the skin). This type of the disease frequently runs a septic toxic course. Metastasis of pneumococcus infections to various organs may cause meningitis, nephritis, peritonitis, and arthritis.

The severest form of pneumonia is presented in the hyper-acute or fulminating type, according to Grosser. Grosser's classification has the advantage of simplicity, though it lacks the detail of clinical description contained in Nassau's monograph. According to Grosser, patients with localized pneumonia present a flushed appearance so long as the heart and circulatory system remains intact. If circulatory failure occurs, the skin takes on a bluish tinge. Restlessness and dyspnea occur. Even in this "blue" form (Grosser) of pneumonia the prognosis may still be favorable.

In contrast to the Group I, the pallid pneumonia must be considered a serious disease, owing to the metastases of pneumococci in tissues and organs. He distinguishes a sub-form which he calls the grey pneumonia, which occurs in premature and in delicate infants. This type corresponds to asthenic pneumonia of other classifications. Following out this grouping based on variations in skin color we note that the localized or red form, together with the so-called blue pneumonia, corresponds with Nassau's pulmonary group. In the pallid group is included all of the severe and fatal forms which may include the cardio-vascular and atonic groups of Nassau. Grosser's classification comprises in this form a general involvement of the whole organism. Ludwig Meyer in commenting on Grosser's classification says that even these boundaries defining the course and the progress of pneumonia are not always respected by natural processes.

Some Rare Forms of Broncho-Pneumonia Intra-Uterine Pneumonia

The subject of amniotic sac contents in the lung of infants was recently reviewed by Sidney Farber and Lewis K. Sweet, who note that Ahlfeld in 1888 pointed out that the fetus in utero could make respira-

tory movements and aspirate amniotic fluid. The aspiration of infected amniotic fluid may produce antenatal and postnatal pneumonias. The contents of amniotic fluid are cornified, desquamated epithelial cells, lanugo hairs, and meconium.

Loeschke notes that there are only three or four authenticated cases where intra-uterine pneumococcus pneumonia occurred as the result of maternal infection with the same disease. The aspirated amniotic fluid may be present in moderate quantity, though the large and terminal bronchi may be obstructed and the patient literally drowned in amniotic fluid. If the aspirated fluid contains meconium an inflammatory reaction about this foreign material may develop. Loeschke has found meconium and amniotic fluid fourteen days after birth, though in some instances it has been observed as late as five weeks postpartum, in the bronchia. Out of thirty-two broncho-pneumonias before the sixth month of life he found eleven cases where aspiration material was demonstrated in the bronchi, but he observes that other cases may have been due to the same cause, since after the lapse of time the foreign material tends to disappear, especially if the pneumonic process is protracted.

Other Forms of Aspiration Pneumonia

In infants of any age, various substances may be aspirated and produce pneumonia. Among these substances may be mentioned dusting powders, stearate of zinc, cereal foods, fats and oils, such as mineral oils, which are used as nasal drops or for internal use in constipation, cod liver oil, and foreign bodies of almost every variety.

In the recent literature aspiration of farina, a mineral oil inhalant, and stearate of zinc, are reported as substances which have been aspirated and produced pneumonia.

Henry Pinkerton reports six cases where fatty or oily material was found in the bronchi and lungs. He also quotes Laughlin of Toronto, who reports four cases where oily substance was found in the lungs in fairly large quantities. Pinkerton believes that the oil finds its way into the alveoli of the lungs by direct aspiration into the

trachea and also when administered as spray or drops into the nose or throat.

The aspirated material, whether it be oil or food, may act as an irritating foreign body, causing cellular infiltration and fibrosis. Following a mechanical irritation, we may assume that infection is superimposed and pneumonia results.

Rheumatic Pneumonia

Pneumonia of rheumatic origin has been a controversial subject. The possibility of the simultaneous appearance of pneumonia with rheumatism has been considered by many writers. In cases of rheumatic carditis where extensive dilatation has occurred, pulmonary atelectasis by compression of the lung may give rise to an area of dullness with bronchial breathing, located usually at the left angle of the scapula. In addition as has been recently pointed out by Benjamin A. Gonley and John Eiman, a specific rheumatic pneumonia may occur in the same way as a rheumatic polyarthritis or pleurisy. These authors found that the histologic study of the lung showed an acute interstitial inflammatory process characterized by hyperemia, edema, and a peri-vascular infiltration of large endothelioid cells, multinuclear giant cells, plasmocytes, lymphocytes, and relatively few polymorphonuclear leucocytes. The straining and general appearance of the endothelioid and giant cells are identical with those found in the Aschoff lesion occurring in the myocardium of rheumatic patients. These cases are nearly always associated with rheumatic heart disease and in many virulent cases of rheumatic fever an associated pneumonia is present.

It would be impossible to discuss all of the voluminous literature on this subject, which is of vital interest to us all. I have selected some of the outstanding contributions, which I have thought would emphasize the most recent progress in our knowledge of pathology and symptomatology. Much is still to be learned about every phase of this disease. Further study and investigation will undoubtedly throw additional light on the nature, course, and treatment of the pneumonias of childhood.

THE RELATION OF RADIOLOGY TO OTHER FIELDS OF MEDICINE*

E. H. SKINNER, M.D.
KANSAS CITY, MISSOURI

It is indeed a pleasure to discuss the invasion of this newest of specialties, radiology, in the field of general medicine. The development of any specialty and the history of its progress or decline is simply a record of the personalities that have engaged themselves with a new field of activity. The attractiveness of the field is responsible for the calibre of the personalities that undertake to fathom the possibilities and determine the future of that particular specialty.

Just as fortuitous circumstance had much to do with the discovery of the unknown or x-ray by Roentgen, just so did this combination cause certain physicians to alter their paths of practice and engage themselves with this spectacular precision method of diagnosis and therapy.

I am not unmindful of the important part played by pioneer radiologists of Colorado in the Drama of the Unknown Ray. Not through historical reference but from actual contact with Stover, Tennat, Robertson, Childs, Wasson, Stephenson and others am I cognizant of the worthiness of Colorado radiologists. They are nearly all still among us. They continue to influence the acceptance of radiology as a distinct specialty in medicine. The ghosts of those departed stalk the dark rooms of fluoroscopy and development and project themselves uncannily into the shadow values of every laboratory.

The luck and charm of early roentgen effort, the rule of thumb, and almost the art of procedures have given way to the mechanical and electrical efficiency of modern roentgen apparatus. Likewise the efficiency methods and the research proclivities of the modern medical student have been applied to radiology, especially in the post-war period, much to its advantage. The pecuniary rewards of early radiologists have been jealously regarded by many who

may have other ideals than those of Osler as a basis of their medical activities.

The glory of the pioneer radiologist has been invaded by the astuteness and the chiseling of a more modern and observing medical mentality. The freedom of the pioneer is disturbed by the efficiency demanded in hospital management and the time dishonored game of fee-splitting has been glorified into division of fees by the hospital octopus.

There are so many phases of discussion upon the relation of radiology to general medical practice that one hardly knows the best avenue of approach. I find the literature upon this particular topic is extensive and I shall copy, paraphrase, quote, and perhaps distort, to my mind's content. Modesty does not dismay me nor fear of repetition prevent me. The values of education and the promulgation of opinions require reiteration of facts and the searching for authoritative support.

I look upon radiology as a service department in diagnostics and as an autonomous field in therapy. Service becomes useful when it becomes indispensable. The mutual benefit of that service rests upon intelligent cooperation and sympathetic understanding of the needs of the general practitioner or specialist who seeks radiologic service. The scope of radiology is broadening rapidly, and it is difficult for many to keep abreast of the accessions to its special knowledge. Perhaps I might use that broad and extensive avenue that would catalogue the usefulness of radiologic examination in general diagnosis and in other specialist's fields.

The primary x-ray field was merely the delineation of topographical variations in tissue densities, and this is a large field. The introduction of opaque media into the hollow viscus, the injection of contrast air and the production of artificial densities by intravenous chemical compounds have permitted radiology to invade fields almost beyond the

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realm of physiologic and anatomic imagination. The radiologist seems to spread his tenacles of diagnostic and therapeutic interest into and about the most intimate problems of every specialty. It affords a refinement never conceivable by the wildest hopes of early radiologists.

I shall rest content, however, to discuss certain policies and practices which have tintured radiology and attempt to take a far look into this developing field of medicine that may warrant and guarantee to future radiologists the measure of reward and pleasure that zeal and ambitious effort demand. No one can assail the assertion that the discovery and development of x-ray has greatly improved the diagnostic and therapeutic powers of medicine and surgery. X-ray diagnosis is largely anatomical and topographical with some satisfactory functional studies, especially in the gastrointestinal, genito-urinary, and cerebrospinal systems. The career of topographical disease may be successfully studied by interval studies of pulmonary tuberculosis and bone disease. The effect of treatment upon defects that may vanish or cicatrize in bone or mucous surfaces or pulmonary tissues can be convincingly portrayed.

The x-ray examination of today with its multitude of refinements provides a definite answer to many special clinical questions and affords a comfortable corroboration of most clinical observations. The x-ray examination has progressed until the radiologist is no longer satisfied to report upon suspicious shadows; it is no longer a simple photographic technic; it is not merely the taking of films, followed by the dictated report. The x-ray examination is a systematic, painstaking procedure which uses every possibility of shadow value, properly correlated with the clinical history and social career of the patient. The x-ray examination is really a clinical examination with method, mechanics, and manifest artistry. The debt that surgery owes to radiology has been beautifully attested by Lord Berkley Moynihan (Mackenzie—Davidson Lecture, 1925) and the growing dependence of medicine by Lewellys Barker (American Roentgen Ray Society, 1926).

The Position of Radiology in Therapy

Here is an entirely different field of radiologic effort than diagnosis. Roentgen diagnosis, while venturing deep into clinical diagnosis, does not carry the essential responsibilities that radiotherapy forces upon the radiologist. The cancer problem looms large here. While the determination of the therapeutic procedure in the given case is a matter of cooperative examination by the surgeon, radiologist, and pathologist, if the therapy is radiologic the responsibility automatically becomes radiologic also. The radiologist has absorbed this responsibility to an extraordinary degree in the few years that have just passed and the future seems to point to the gradual absorption of all non-surgical cancer therapy into the field of radiology. Radiologists seem to welcome this responsibility even though the field of oncology may not seem to present such alluring possibilities. The field of radiologic therapeutics, both roentgen and radium therapy, carries a dignity and responsibility that cannot be assailed or absorbed by technician or tyro. The ultimate results of radiologic therapy depend upon the painstaking, thoughtful application of physical and optical laws of radiant energy based upon judgment, backed by experience, and warranted by cooperative authority.

Here is a field of responsible therapy that cannot be acquired from the salesman nor pursued by the technician. It is a field in which the public demands a reliable degree of special preparation and application by the physician. Here is a field in which both the public and the physicians demand more than mere possession of apparatus or mere pictorial display. True, we have the quite apparent commercial promotion of radium rental and the ambitious attempt of some surgeons and gynecologists to absorb radium therapy into their daily practice, but fortunately radium therapy is an autonomous field of endeavor and is too deep and too comprehensive to be absorbed by any others. Be reminded that I do not decry the rental of radiant energy to qualified radiologists, but I do most vehemently assail the right and justice of any other unqualified physician to exhibit radiant energy to the

unsuspecting and indiscriminating patient. This is a matter upon which the public is being informed by the best authorities and the reliable national bodies of qualified physicians and physicists. No legislation is required. Public opinion can and will be aroused. The inevitable forces of society and the very nature of this profound problem will determine the safe and sane application of radiant energy by qualified radiologists. The American Society for the Control of Cancer, the American Radium Society, and the Council upon Physical Therapy of the American Medical Association have passed resolutions condemning the rental of radium and radon to physicians who are not qualified and experienced in radium dosage and radium therapeutic technic.

It will not do to tell the story of the patient to a mail-order emanation plant and expect lasting results. Only the trained, qualified, experienced radiologist can plan the radiotherapeutic attack basing his dosage upon the biopsy findings, the size and character of the growth, its proximity to bone, its radiosensitivity or radio-resistance, its glandular extension, its metastatic manifestations, its surgical approach, and the filtration, dosage and distribution of radiant energy to achieve a homogeneous effect of lethal quality.

This is a complicated process, each factor of which may vary in seemingly similar situations. Is it any wonder that radiologists should rightfully expect the support of the profession in their request for autonomous control of radiotherapeutic methods. The present furor accorded these ambitious but unqualified physicians who bring a patient in contact with radium will give way to the public and professional demand that the patient rather come in contact with a qualified radiologist.

The Radiologist Is a Consultant

The radiologist must be granted a consultant's status. His reports must be based upon the shadow values of his x-ray examinations and their integration with the clinical career of the patient. There used to be an attitude of competition between clinical diagnosis and roentgen diagnosis. Now

this seems childish and foolish. I do not like the term roentgen diagnosis, preferring to report the roentgen findings and fitting these findings into the whole picture with the pathologic examinations and clinical examination. This completed triad becomes the diagnosis of the studied case.

Conferences with the clinician in the roentgen laboratory serve to amplify the shadow values and bring harmony and satisfaction. Without clinical conferences and without the clinical aspects available, the radiologist is inclined to be dogmatic in his reports. This leads to embarrassing misunderstandings. It is a well-known fact and frequently expressed that there may be too much dependence upon the roentgen examination. It is used by internes and even worthy practitioners as a short cut to diagnosis. Especially is this true in fractures, gastro-intestinal and pulmonary cases. It is a great compliment to radiology, but it should not be encouraged at the sacrifice of clinical acumen. It is an injustice to the patient, equally as reprehensible as any failure not to demand radiologic consultation when indicated.

The demand that the radiologist be considered a consultant carries responsibilities. The consulting radiologist must have gone through a period of training, acquired sufficient experience in interpretation, learned the technical requirements of radiologic science, and be possessed of the art of medicine. The radiologist should be a physician practicing radiology. The possession of apparatus does not confer the degree of diagnostic ability. The specialist by assertion is quite another individual from the specialist by qualification. As yet there is no national board in radiology, but there is a certain degree of attestation by the new A. M. A. laboratory rating system.

The Clinician Who Installs His Own X-ray Equipment

There has been a tendency among many strong, well-qualified clinicians to install x-ray apparatus in their own offices. This was especially noticeable during the late but departed prosperous years. It was encouraged by manufacturers of roentgen apparatus. There may have been some jealousy or

pique at the number and amount of cases referred to radiologists. There may have been some hope of salvaging some of the profits. Patients are trusting souls, and the convenience of the examination in the clinician's office may have obscured their appreciation of the examination's completeness and values. The glamor and the magic of x-ray examinations serve to mystify the confiding patient and lull him into a false sense of diagnostic security. There is no doubt that x-ray examinations have been oversold to medical customers.

As Jaches points out, "The supposed advantage in favor of the clinician is the knowledge of clinical aspects of the case and the convenience." This is more than overcome by the natural tendency to favor an interpretation which bolsters up a clinical preconception and by the unavoidable lack of knowledge of general roentgen pathology with the consequent failure to observe pathologic conditions other than those looked for. It is curious that a clinician who would not risk diagnosing the gross lesions found on the operating or the post-mortem table will not hesitate to diagnose the shadows of such lesions cast on the roentgenogram.

There is a tendency to discontinue this inadequate roentgen examination in the clinician's offices. The overhead of thorough technical x-ray procedures is now impractical under depression stress and strain. The careful clinician is finding that this method of practice is not giving him the results hoped for. Principally, the public is demanding x-ray examinations by radiologists because of their completeness and because the costs of good examinations are identical.

The Future of Radiology

The technical difficulties of the early days forced an undue emphasis upon technic. Diagnostic interpretation was underestimated. Now that good technic is no longer the sole possession of the few, the function of the radiologist does not always carry the respect that diagnostic ability warrants. The personality and increasing merit of the leading radiologists has been a great factor in combating this attitude and in re-

directing radiology into its rightful channels.

Groover feels that every specialty goes through certain changes before it becomes stabilized and permanently adjusted to medical practice as a whole. In the earlier stages of its evolution, its fate rests entirely with the medical profession. A pioneer in a new specialty is usually entirely dependent on the patronage of practitioners in other fields. He is expected to confine his activities within narrow bounds. Gradually a readjustment takes place and patients begin consulting a specialist on their own initiative. The radiologist's colleagues in other fields will doubtless continue to refer patients to him, but with this added incentive, that the patient expects it and in the ordinary course of events would likely go to him anyway.

The position of radiology will depend largely upon the measure of public respect and esteem it may be able to command. Groover feels that radiology has not yet reached the stage of complete stabilization. He feels that this is eventually assured. In the past the radiologist has naturally been primarily solicitous of the patronage of physicians in other fields. He has not taken advantage of his opportunity to incur public favor and establish a clientele of his own. He has narrowed his field of endeavor to unreasonable limits and has detached himself from what we ordinarily understand as the practice of medicine. It is questionable, according to Groover, whether the radiologist who spends the major portion of his time running hither and yon reading films has much more justification for styling himself a practitioner of medicine than has a proof reader to style himself an author.

It is fortunate for radiology that throughout its vicissitudes, many of its leaders have maintained their status as practitioners of medicine in every sense of the word, and that they are not only highly regarded as consultants by their professional colleagues, but by an ever-increasing clientele outside the profession. With a maintenance of such leadership a bright future for radiology is assured and to young men with proper background, it offers splendid opportunities.

REST AND SHOT BAGS IN PULMONARY TUBERCULOSIS*

GERALD B. WEBB, M.D.
COLORADO SPRINGS

Of all the countless remedies for tuberculosis, rest alone has stood the test of time. The value of rest, physicians learned from surgeons. David Jean in 1779 first established the value of rest as a cure for Pott's disease, and John Hilton in 1863 carried the method further for the treatment of joint tuberculosis and noted its value in pulmonary tuberculosis. Physicians have been very slow in appreciating the value of the thorough application of the principles of rest in pulmonary tuberculosis. Up to 1916 when the author first pointed out the value of postural rest, patients with pulmonary tuberculosis were allowed, almost invariably, to recline with the more active diseased lung uppermost. It may interest you to know that the first patient treated by what the author termed postural rest is still alive and perfectly well. The patient was sent me by the late famous surgeon, Dr. J. B. Murphy of Chicago, and the request was sent to apply artificial pneumothorax—a method advocated by Dr. Murphy in Colorado in 1898. A visit being made for the purpose of beginning artificial pneumothorax, the patient was found asleep on her sleeping porch. It was noted that she was resting on the side which had no disease, while the lung with advanced disease was uppermost and therefore carrying on most of the breathing with respiration and movement over one thousand times an hour. The patient was induced to postpone pneumothorax and to try the effect of resting on the side of the diseased lung. This resulted in complete cure of a lung with advanced cavitation.

The problem then arose as to how we could improve the rest regime for the lungs in patients with bilateral active apical pulmonary tuberculosis. The disease in many patients being frequently apical and bilateral, the idea occurred to me to apply shot bags below each clavicle. It was first sug-

gested to begin the weight of the shot bags with a few ounces and gradually increase to three pounds. Later a pound weight was found sufficient, for only moderate pressure will restrain the chest movements. Following the application of shot bags in this manner it is usually noted that the diaphragmatic breathing is increased. The weights also assist the contraction of the chest wall which Nature, with gibrosis, is endeavoring to effect.

But possibly of equal value to the mechanical aid to rest is the more thorough rest of the patient, because there develops a hesitation to disturb the shot bags by unnecessary movements.

The value of shot bags has been proved in patients with pulmonary hemorrhage. The modern tendency for early collapse therapy such as artificial pneumothorax, phrenicectomy, and thoracoplasty, is not endorsed by the author. The simpler methods of applying more complete rest to the lung by posture and shot bags always have first consideration.

It has not been possible for me to compile comparative statistics in regard to the results of the simpler methods. While the pathology in patients can be compared, the resistance, the temperament, and the cooperation of patients make comparative results impossible. Inasmuch as fashion is dictating immediate collapse therapy for so many patients when the diagnosis of pulmonary tuberculosis has been made, it has seemed timely to bring before you again the simpler principles of thorough bed rest with posture and shot bags which may achieve results equally spectacular with those of surgery.

I am well aware that valuable results are obtained by bed rest alone in pulmonary tuberculosis, yet experience has taught me that in many patients even better results may be obtained by postural rest and by the application of shot bags. The simplicity of such procedures needs no apology. Objection may be made that the method is slow, but after all the collapse therapy is equally

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slow and by no means devoid of dangers and complications.

It is possible for a patient not to be improved by postural rest or by shot bags. The same patient may be harmed by phrenicectomy and not cured by thoracoplasty. In addition a recurrent laryngeal nerve has become paralyzed following the latter operation. Such cases serve to show that even the most complete rest of a lung will not always cure pulmonary tuberculosis. Whatever method of applying rest is adopted, pulmonary tuberculosis is rarely, if ever, eliminated in less than four years.

ABSTRACT OF DISCUSSION

C. O. Giese, M.D., Colorado Springs: The first thing to do after making a diagnosis is to secure rest, and it certainly is advisable to try the simpler forms first if the lesion is not of sufficient intensity but what the milder forms will secure results. There are certain cases, of course, in which nothing but the most drastic measures will accomplish what we desire. There are all forms of localized treatment. In addition to this, the general rest of course must be secured, first if possible, to see how effective it is. I was impressed with Dr. Webb's suggestion that probably the good effect of the shot bags is due to the discomfort incidental to motion, consequently keeping the patient more quiet, and in that way securing the general rest so essential to recovery. There are many cases wherein all forms of rest appear to be unavailing, and those are usually the cases where the patient rebels at rest, either local or general.

Long before we did phrenicectomies, I was attempting to do a pneumothorax on a patient with a very extensive left side lesion. As sometimes happens, I introduced the air into the peritoneal cavity instead of into the pleural cavity—I soon realized this from the oscillations of the manometer. I gave no more air, tried higher, couldn't secure an open space and discontinued. The remarkable thing about it was that unbeknown to myself I had partially paralyzed the diaphragm on that side; the patient began improving and I didn't know for about five or six years what a successful operator I had been my making a mistake. I simply put the air below the diaphragm and secured a temporary paralysis of the diaphragm on that side, with wonderful results to the patient. The patient is still living and in very good condition.

I believe that we who see a fair number of cases of tuberculosis ought to continually stress the point that in the early cases the simpler forms of rest should be tried first. Then perhaps the more drastic forms of localized rests such as the resection of the phrenic nerve, pneumothorax, and have not quite so much enthusiasm for a thoracoplasty as we sometimes see expressed.

Leonard Freeman, M.D., Denver: Dr. Webb has given us a very excellent method of treating cavities in the upper portion of the lungs. In 1900, I devised a successful method of compressing cavities in the upper portion of the lung. It consisted in removing portions of the second and third ribs, anteriorly, and then closing the skin. After the sensitiveness had subsided, an ordinary spring truss was fitted to the chest with its pad

over the ribless area in front and the other end placed against the back with the spring passing over the shoulder, both ends being well padded.

By this means I was able to cave in the chest over an area just below the clavicle to a very considerable extent. The advantages of this method are not only that we obtain rest of the lung, but, unlike the shot bag, the truss always remains in place in spite of movements by the patient, and the pressure can be regulated by the amount of padding. Also the patient can sit up or move about if desired. I have also used this method in collapsing empyema cavities.

I. D. Bronfin, M.D., Denver: Dr. Webb's paper is indeed very timely, since there is a tendency in some localities to radical methods in the treatment of pulmonary tuberculosis. Some enthusiasts even advocate pneumothorax for hemoptysis in early cases despite the fact that pulmonary hemorrhage in the majority of instances stops of its own accord. Nevertheless, I felt justified in making an appeal in 1924 before the National Tuberculosis Association for the early application of pneumothorax because of the sad experiences we had had as a result of procrastination.

It has been our rule for some time that when a patient has been on bed rest for six months and the pulmonary lesion is either stationary or slightly progressing, some form of collapse therapy is undertaken if the contralateral lung is in fair condition and there are no other existing contraindications. I am entirely in accord with Dr. Giese's appeal to use first the simpler methods before resorting to surgical measures. On the other hand, there is no set rule that could apply to all cases. Patients must be individualized and treated accordingly. The greatest advances in the therapy of tuberculosis are the various surgical methods, namely, pneumothorax, phrenicectomy, and thoracoplasty. These measures should not be withheld from the patient too long after conservative methods have been tried for a reasonable time and had been found to be unsuccessful.

W. B. Yegge, M.D., Denver: I simply want to ask Dr. Webb a question. I realize that in all tuberculous patients the question of time is a problem that has to depend on the condition of the chest. How long do you usually keep these patients under treatment with the shot bag and posture treatment? And how long do you generally keep these patients under treatment before you give them up as hopeless cases?

Dr. Webb (Closing): It doesn't matter whether pneumothorax, phrenicectomy, or thoracoplasty is done, it takes four years to cure a patient. I don't know what form of rest can be used to get the patient well under four years.

I am glad Dr. Giese approved of the simple methods. The reason for this paper is that so many publications now come out saying a collapse therapy must be done instantly upon diagnosis being made. Collapse therapy has its complications; it isn't so simple as it seems. This method hasn't so many complications.

I know Dr. Freeman's work and think it is excellent. The matter of the cave-in is good for the patient, because Nature is trying to draw things together by fibrosis. With the shot bag we also have a certain amount of cave-in—not as much as Dr. Freeman has, however.

My plea is to try always the simple methods and do them thoroughly—not let patients be up and around whenever they feel like it. A number of these cases had special nurses. They were not out of bed. Some were not off their backs for a year or two years. It was done very thoroughly, with complete bed rest.

EARLY DIAGNOSIS

THE NEUROLOGIC DIAGNOSIS OF PERNICIOUS ANEMIA

WITH REMARKS ON TREATMENT

LUMAN E. DANIELS, M.D.
DENVER

The outstanding symptoms as well as the most obvious physical findings encountered in the early stages of pernicious anemia are, in not a few instances, referable to subacute combined degeneration of the spinal cord. Such signs and symptoms may indeed appear before a diagnosis of pernicious anemia is possible by hematologic study alone, and cases are seen occasionally in which the disease of the cord terminates fatally prior to the appearance of an anemia. Davidson and Gulland² state, in their excellent monograph, that in the majority of cases of subacute combined degeneration, the neurologic changes occur earlier and are more marked than the blood changes. From the standpoint of treatment which in cases of pernicious anemia with neurologic complications must be prompt and adequate, it is fortunate, therefore, that the diagnosis of subacute combined degeneration is relatively easy.

Localized areas of degeneration in the white matter of the spinal cord, the so-called Lichtheim plaques, constitute the essential lesion of the disease. These plaques enlarge by coalescence as well as by direct extension. Small circular areas of total destruction of tissue, the "Lückenfelder" of the Germans, are also quite characteristic. Although replacement of the destroyed nervous tissue by glial proliferation is often conspicuous by its absence, it does occur, particularly in the more chronic cases. The changes are generally most marked in the posterior columns of the cord although, when the disease is at all extensive, involvement of the lateral columns, especially the portion occupied by the pyramidal tracts, is seldom lacking. Since the anterior columns are not infrequently involved, however, and the degenerated areas distributed in a more or less irregular manner, the terms "postero-

lateral sclerosis" and "combined system disease" are hardly applicable. Changes are found in the peripheral nerves although the various authorities fail to agree in regard to the frequency of such changes.

A persistent numbness and tingling of the hands and feet is the most characteristic early symptom. The paresthesias in some cases gradually extend up the legs to the trunk where the patient may experience a girdle sensation. Tenderness of the soles and calves is not infrequent. The early symptoms are, in fact, quite suggestive of a peripheral neuritis. As the disease progresses, the legs become ataxic and weak and the patient may eventually lose control of his sphincters and become bed-ridden.

Before any weakness or ataxia is apparent, there is a definite reduction of osseous sensibility as determined by the patient's ability to perceive the vibrations of a tuning fork applied to the malleoli and other bony prominences of the lower extremities. Vibratory sensation, the conduction of which seems to be one of the most delicate functions of the posterior columns, may be completely abolished over the ankles before the joint sense of the toes is impaired to any considerable degree. Cutaneous sensibility is usually less impaired than deep sensibility, although in the advanced cases presenting the picture of a transverse myelitis, a definite sensory level may be demonstrated. The tendon reflexes may be exaggerated, diminished, or absent. Marked spasticity is not frequent; muscular tone may actually be reduced. A Babinski reflex can often be elicited even when the tendon reflexes are diminished or absent.

Gastric analysis should not be neglected when subacute combined degeneration is suspected, for if the presence of free hydrochloric acid can be demonstrated, the patient in all probability does not have the disease. Since an achlorhydria may exist in individuals not suffering from pernicious anemia, however, the negative value of the test exceeds the positive. In doubtful cases the histamine test may prove useful. Even though the patient is not anemic, a trained hematologist may find morphologic evidence of pernicious anemia.

Given a familiarity with the clinical picture of subacute combined degeneration, mistakes in diagnosis are, as a rule, easily avoided. In *tabes dorsalis*, the evolution of symptoms is generally much slower, marked impairment of vibratory sensation being relatively late in its appearance. Lightning pains, not persistent paresthesias, constitute the most frequent complaint in the early stages of *tabes*. Evidence of involvement of the posterior and lateral columns may be found in interstitial lues of the cord, but other signs of the underlying disease, including serologic changes, generally suffice to establish the diagnosis. In multiple sclerosis which occurs in younger subjects as a rule, the course of the disease is more irregular and the symptoms and signs are often less symmetrical in their distribution than in subacute combined degeneration. A "zone one" type of curve in the colloidal gold test of the spinal fluid may serve to complete the diagnosis of multiple sclerosis in doubtful cases where some of the characteristic signs of the disease are lacking. Compression of the cord by a tumor or disease of the vertebrae must be considered in the differential diagnosis even when there is no history of a radicular type of pain. For this reason, the Queckenstedt test for spinal block should not be neglected at the time of lumbar puncture. Arteriosclerotic changes of the cord may produce in the aged a picture simulating combined degeneration.

When Bremer¹ reviewed the subject in 1931, opinions relative to the efficacy of liver feeding in subacute combined degeneration seemed to be about equally divided. Although one would hardly expect any form of therapy to effect the restoration of totally degenerated spinal tracts, it is disturbing to know that neurologic complications may develop while the patient is under adequate treatment for his pernicious anemia. My experience is in accord with the general impression that symptoms of spinal disease are specially prone to appear when the patient, encouraged by a good blood remission, becomes careless in regard to his daily ration of liver. Raw liver in large amounts seems to be more efficacious than the commercial extracts although Schilling⁵ ob-

tained prompt and marked improvement in cases of subacute combined degeneration with intramuscular injection of a potent extract. Dessicated hog stomach³ has proved to be effective in some cases, as has raw brain⁶. Sargent⁴ reported good results from the use of iron in massive doses in cases previously resistant to treatment with liver. It is heartening to know that in spite of many failures, marked regression of the signs and symptoms of involvement of the nervous system has followed institution of the various forms of treatment enumerated. As the early recognition and adequate treatment of subacute combined degeneration becomes more general, the number of favorable results should increase.

REFERENCES

- ¹Bremer, F. W.: *Zentralnervensystem und perniziöse Anämie*. *Ergeb. d. inn. Med. u. Kinderh.* 41:143, 1931.
- ²Davidson and Gulland: *Pernicious Anemia*. St. Louis: Mosby & Co. 1930.
- ³Guttmann, L.: *Die Wirksamkeit der Magengewebtsdiät auf die funiculäre Spinalerkrankung und auf die psychischen Störungen bei der Anaemia perniciosa*. *Ztschr. f. d. ges. Neurol. u. Psychiat.* 137:354, 1931.
- ⁴Sargent, W.: *Treatment of subacute combined degeneration of the cord by massive iron dosage*. *Lancet*. 1:230 (Jan., 1930), 1932.
- ⁵Schilling, V.: *Gänsslen's injizierbares Leberpräparat*. *Klin. Wchnschr.* 10:301 (Feb. 14), 1931.
- ⁶Ungley, C. C.: *Effect of brain diet in subacute degeneration of the spinal cord*. *Lancet*. 1:227 (Jan., 30), 1932.

CASE REPORTS

THE "BIRTH" OF A SUBMUCOUS UTERINE FIBROID

N. L. BEEBE, M.D.
FORT COLLINS

In past years very large fibroids were rather frequently seen, but in more recent years due to widespread health education, women usually consult a physician with the first appearance of a tumor, or at least before it has reached much size. This case is reported because of the large size of the fibroid, also because of the associated findings and complications.

On Sept. 11, 1930, I was called in consultation by Dr. Raymond of Wellington to see this patient, a woman of 55 years.

The present complaint was uterine hemorrhage, for four days, and backache. As I started to examine the patient, she remarked incidentally that her abdomen had been getting larger for the past year.

Briefly, the family and past history showed that the patient's mother had died of cancer of the breast; the patient had blood-poisoning after a childbirth 25 years before; periods had been irregular for the previous 10 years, more so during the preceding two years, the last period having been six weeks before. She was the mother of two children, childbirths having been normal except for post-partum infection as stated above.

Physical examination revealed a large, well developed, well nourished, anemic woman, weight 156 pounds. There was a grade 2 infection of the teeth. The chest and breasts were negative; heart regular, rate 102, with no murmurs; blood pressure was 140 systolic, 80 diastolic. Abdominal examination showed a tumor the size and shape of a nine months pregnancy, but firmer. The pelvic examination was of special interest. The cervix was dilated to five centimeters; the edge of the cervix was very thin but more firm than that usually found at normal delivery. There was complete effacement of the internal os, and the lower uterine segment was occupied by a firm oval mass the size of a child's head.

A diagnosis of submucous fibroid was made and the patient moved to the hospital. The blood picture at this time showed the hemoglobin to be 45 per cent and erythrocytes 2,700,000. Glucose and normal saline solutions were given intravenously, but immediate operation was postponed because of evidence of necrosis and sloughing of the presenting tumor with cessation of hemorrhage. On September 16, indirect blood transfusion was done. By the next day there was complete cervical dilatation and the tumor had descended to mid-pelvis; it seemed apparent that the blood supply of the tumor had been cut off and it was being expelled by the uterus. During this time there was more or less constant backache with irregular "labor" pains.

After consultation with the late Dr. Kickland, it was decided to try to remove the

tumor through the vagina. This was promptly attempted under ether anesthesia. The gloved hand was introduced between the tumor and uterine wall up to the fundus. The tumor was free in the uterine cavity except for a rather broad attachment in the right lateral fundus. Because it was impossible to ascertain the thickness of the uterine wall I was afraid to attempt to free the tumor by blunt dissection but was able to remove about four pounds of the lower part of the tumor by sharp dissection. There was very little bleeding.

Two days later, after another blood transfusion, supravaginal hysterectomy was undertaken. The abdomen was opened from the midepigastrium to the pubes, and a uterus as large as a seven months pregnancy delivered into the wound. After the broad ligaments were clamped, it was found impossible to clamp the lower uterine segment which was desirable to prevent soiling of the abdomen. The uterus was then packed off with towels and bisected; the tumor was removed after which the uterine walls, which were three to four centimeters thick, were restitched and painted with tincture of iodine. It was then possible to clamp the lower uterine segment and complete the hysterectomy. The culdesac was drained through the vagina and a cigarette drain placed in the lower end of the abdominal wound, but no drainage was put in the upper abdominal wall. The operation was followed with a second blood transfusion.

The postoperative course was rather stormy. The temperature reached 102 degrees, though the pulse was of good quality. Seven days after the abdominal operation, the patient coughed and bursted open the incision which was found to be infected. This probably would not have happened had more drainage been put in the abdominal wall. The patient was taken to the operating room where the wound was restitched with silkworm gut; additional drainage was established.

Convalescence continued rather stormy for another ten days when symptoms of partial obstruction of the bowel appeared, but this cleared shortly. After another blood transfusion, the patient was discharged,

thirty-five days after entering the hospital, with the wound completely healed and the temperature normal. This patient has continued since that date in good health. A recent examination revealed a negative pelvis and an intact abdominal wall.

school rather than to enter industry. Restricted employment under present conditions has had the effect of keeping the more expert workmen at their jobs (with a consequent decrease in fatal accidents). (The figures were based on insured lives.)

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Schools and the Depression

Nearly 5,000 schools in the United States have been closed during the depression, according to a statement of the National Education Association, made public recently in announcing the program for the sixty-third annual convention of the National Educational Association Department of Superintendence. The meeting will center around the financial crisis in education and a commission appointed by the National Education Association will outline a definite and constructive program for "saving the schools".

The statement points out on the one hand the greatly increasing burdens heaped on the schools by the present situation and, on the other hand, the decreasing revenues with which the schools must function. Expenditures for school buildings have slipped from an annual total of \$400,000,000 per year to \$154,000,000. In 1930, sixty-three cents was available for the education of each child per day. In 1933, there is approximately 49 cents.—From *The American Child*, March, 1933.

Health Hazards

According to statistics of the Metropolitan Life Insurance Company, occupational hazards in 1932 were 22.9 per 100,000, which is the lowest in the company's experience—a period of twenty-one years. For age groups there has been a marked decrease in accidents for the younger group—for the period 20 to 24 years there was a drop of 50 per cent when comparing 1931 with 1921. Part of the decrease at the younger ages reflects the tendency which has been going on for a long time for young people to remain at

Cancer

Dr. Clarence Cook Little, Managing Director of the American Society for the Control of Cancer, has made some pertinent observations and statements concerning cancer. "As applied to human beings there seems to be little need for worry concerning the direct influence of heredity. This factor which in material like mice can be regulated and classified by intensive inbreeding is, in human material, so complex and so subject to modification by age, sex, and other environmental agents, such as chronic irritation of different types, that it is not likely to become a matter of very great immediate practical importance.

"As an experimental approach, however, genetic methods have great possibilities. By selective breeding it is possible to produce strains that have from 90 to 100 per cent cancer of the breast in breeding females which live beyond a certain age characteristic of the strain. This gives the experimenter a great quantity of tumors with which to work without necessitating the employment of experimental treatment such as tar or other irritants. The naturalness of the method of cancer origin in animals from such a 'high cancer' strain will be an important factor in increasing the likelihood of a close parallel in their behavior under observation with that found in the case of human cancer."—From *Boston Health League Bulletin*, February, 1933.

Even if the depression passes tomorrow, its wake will be dotted with distressed, underfed, unwanted and forgotten children—boys and girls that assuredly are worth the saving. And they should be saved before they are forced into delinquency.—Clarence D. Martin, Governor of the State of Washington, in his message to the Legislature, January, 1933.

BOOK REVIEWS

Medical Clinics of North America. November, 1932. Volume 16. Number 3.

In 1929, the University of California established a Visiting Lectureship in the Medical School under the deanship of Dr. Langley Porter. For the third series of lectures and demonstrations in the year 1931-1932, Dr. Jonathan C. Meakins, Professor of Medicine at the McGill University Medical School, Montreal, Canada, was chosen. The entire volume is given over to Dr. Meakins' clinics and lectures. There are Theatre Clinics on the subjects of Dyspnea, Cyanosis, and Edema.

The clinics are extremely interesting and practical, largely in the form of case presentations with questions and answers by students and comment by Dr. Meakins. The subjects presented are Rheumatic Fever, Serous Tuberculosis, Arterial Occlusions, Chronic (nontuberculous) Pulmonary Disease, Nephritis, Tetany, Jaundice and Blood Pressure, Multiple Cerebral Lesions, Disseminated Tuberculosis, and Thyrotoxicosis.

An address was delivered by invitation before the San Francisco County Medical Society on The Treatment of Cardiac Irregularities. In this address Dr. Meakins points out that many medical cases can be treated with almost mechanical certainty. That skill in medical treatment requires careful study and understanding of the tools with which we work, and that many of our shortcomings are due to not paying sufficient attention to the technic of treatment as compared to that devoted by successful surgeons.

LORENZ W. FRANK.

Nutrition Service in the Field: Report of the Subcommittee on Nutrition. Samuel McC. Hamill, M.D., Chairman. 1C, Section I, Medical Service; Child Health Centers: A Survey; White House Conference on Health and Protection. With appendix 196 pages. New York: The Century Co.

The book explains in an exhaustive way how a community may obtain a satisfactory nutritional service. It first defines a nutritionist setting forth her qualifications and duties. A plan is laid down to gain the cooperation of numerous agencies in the development and extension of the service. These include aid obtainable from the Extension Service of the United States Department of Agriculture and Home Economics, the Red Cross, boards of health and departments of welfare, boards of education, health centers, hospitals, clinics and dispensaries, dental infirmaries, and the publicity afforded by newspapers, magazines and the radio.

Numerous examples of how a nutritional service may be organized and maintained are given. Illustrative methods of tabulation of the work done and results obtained with a view of standardizing, correlating and utilizing the information are shown.

It should be a most valuable book to those interested in this line of endeavor.

WILFORD W. BARBER.

Diseases of the Blood. By A. Piney, M.D., Ch.B., M.R.C.P., M.R.C.S. Fellow of the Royal Microscopical Society; Member correspondant de l'Academie de Medicine de Paris; Director of the Pathological Department. The Cancer Hospital (Free), London; Consulting Physician,

Chelmsford and Essex Hospital; Late Director of the Institute of Pathology, Charing Cross Hospital, London; Sometime Lecturer in Pathological Histology in the University of Birmingham; and Arris and Gale Lecturer of the College of Surgeons of England. Second Edition. With 65 illustrations, 14 in color. Philadelphia: P. Blackiston's Son and Co., Inc. 1012 Walnut Street. 1932. 310 pages. Price \$4.00.

While the author develops the subject from the standpoint of the hematologist, he marshals an array of facts of unusual interest to clinicians. He begins with the normal blood and blood forming organs, including the variations in the leucocytes and erythrocytes and the implication of these variations. The chapter on the anemias is an attempt to relate and correlate the characteristic blood changes. The same is true of the leucoses.

Hemorrhagic diseases are discussed together and the essential course of each disease is pictured as having certain things in common with most of the other hemorrhagic diseases. Splenic diseases are discussed in another interesting group. Some peculiar blood pictures and some diseases of the reticulo-endothelial system are presented, and their essential nature and relationship are discussed.

The book is interestingly written and seems to gather together a wealth of practical and up-to-the-minute data on diseases of the blood. Out of our usual conception of multiplicity and unrelatedness, the author substitutes a few logical groups, and, by the logic of the data presented, impels the reader to an acceptance of these groups.

C. F. KEMPER.

Modern Surgery. By J. Chalmers DaCosta, M.D., LL.D., F.A.C.S., Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Surgeon of Jefferson Medical College Hospital, Consulting Surgeon to the Philadelphia General Hospital, St. Joseph's Hospital and Misericordia Hospital, Philadelphia. Assisted by Benjamin Lipshutz, M.D., F.A.C.S., Surgeon to the Mt. Sinai Hospital; Associate in Neuro-anatomy, Jefferson Medical College. Tenth Edition, Revised and Reset. 1404 pages with 1050 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$10.00.

This book is probably the most complete one-volume text of surgery in existence today. It covers the fundamentals of surgery completely, and yet not in a manner that is too detailed, thus making an interesting and very readable text for the student. Each section, which is excellently illustrated with actual photographs, leaves a permanent and accurate picture of each disease entity.

A necessary foundation for the specific surgical conditions that follow is laid down in the introductory chapters of Inflammation Repair and Surgical Fevers. The author's treatment of these essential processes is so complete and readable that one might think he was reading a textbook of pathology.

The chapter on Contusions and Wounds is exceptional, because the treatment and management of all types of injuries are presented in such detail and are so completely illustrated. Again the chapter on Fractures is commendable. The author here has considered carefully each type of fracture and given a choice of simple methods of treatment. A rather incomplete discussion has been given the chapters on Burns and Scalds, Effects of Cold, and Diseases and Injuries of the Thyroid Gland. However, they probably are

treated as detailed as possible in a general text on surgery. In the chapter on Diseases of the Mammary Gland, we find again the numerous accurate illustrations and an understanding discussion of the classical technics.

The book considered as a whole certainly more than serves the purpose for which it is intended.

GEORGE B. KENT.

Habits, Their Making and Unmaking. By Knight Dunlap, Ph.D., Professor of Experimental Psychology, Johns Hopkins University. New York: Liveright, Inc., 1933. 322 pages. Price \$3.00.

The thesis of this book is that one should combat an undesirable habit by negative practice, that is, by doing voluntarily what one has formerly done involuntarily. If one wishes not to stammer, he must stammer; that is, he must stammer deliberately and as nearly as possible in the manner in which he would stammer involuntarily. "This is simple in theory. In application it is difficult, requiring an expert psychologist for its direction." "No fixed rules can be laid down for this procedure. The psychologist must possess the knack of teaching, or he would better not undertake the treatment of stammering at all."

Presumably the author has in mind the confirmed stammering of the adolescent or adult, though he does not say so. The procedure would be absurd in the case of a young child who has recently developed stammering as a result of shock or illness, or even as a result of imitation. The reviewer has no faith in the method even for adults. He tried the procedure in 1906, and found it to be disastrous.

Among other specific habits the author mentions, thumb sucking and nail biting. In the case of nail biting he is enthusiastic about the results obtained. Negative practice in masturbation should be undertaken in the presence of a third person, preferably a physician. With homosexuality, negative practice consists in an approximation of the act. "By using the approximation, the form rather than the substance, adverse criticism (however unfair) is avoided."

It is difficult to appraise this book. Certainly it is not a book for the general reader, though it is offered in popular style with Hearst headlines on the paper jacket. The discussions on the psychology of learning will take the general reader out of his depth. He may even be carried off his feet by the chapters dealing with habit. Undoubtedly he will be disappointed when he learns that the book presents a method to be applied only by expert psychologists of broad clinical experience. The psychologist will be disappointed to find that the theory of learning gives little support to the practice advocated. However, he will appreciate the author's independent viewpoint. The student will find in this book as fine a bibliography as he could wish to see compiled.

C. S. BLUEMEL.

The Sex Technic in Marriage. By Isabel Emslie Hutton, M.D. Foreword by Ira S. Wile, M.D. Former Commissioner of Education, New York City; Associate in Pediatrics, Mount Sinai Hospital; President, American Orthopsychiatric Association; Associate Editor, American Medicine; Member, National Committee for Mental Hygiene; Fellow, American Psychiatric Society; Fellow, American Public Health Association. New York: Emerson Books, Inc. 160 pages. Price \$2.00.

This is a well-written, sane, and authoritative discussion of a timely subject. It may well be recommended to laymen interested in the subject.

The outstanding characteristic of merit is its definiteness and willingness to go straight to the point.

G. HEUSINKVELD.

Blood, a Study in General Physiology. By Lawrence J. Henderson, Professor of Biological Chemistry in Harvard University. New Haven: Yale University Press. London: Humphrey Milford. Oxford University Press. 389 pages. Price \$5.00.

It is a far cry from the hurly-burly life of the general practitioner to the quiet academic existence of the research worker such as the physiologist. Not that the latter's activity is free from thrills as when a new discovery is made or a biochemical problem is solved. To review a work of this type, based as it is on exact scientific procedures and presupposing a familiarity with differential and integral calculus, not to mention colloid and physical chemistry and translate it into terms intelligible to the clinician, is indeed a difficult task both for the reviewer who is conscious of his shortcomings as well as for the reader who desires a short summary. One feels the same hesitancy as those who have endeavored to simplify Einstein. Yet the fault lies not with the author of this admirable work but with the inevitably weak preparation of the average medical men in the scientific ground work involved in the work of the physiologist.

The book is an expansion of the lectures given by the author at Yale under the Silliman Foundation which makes possible an annual course of lectures by men distinguished in the various sciences. Prior to Henderson, Professor J. S. Haldane, the eminent British physiologist, and A. Krogh of equal fame, from the University of Copenhagen, had delivered lectures in this field under the auspices of the Silliman Foundation.

As the title indicates, the object of investigation is the red blood of the vertebrates, as a physico-chemical system and as a tissue. In the introductory chapter the author shows his erudition not only as a chemist but also as a philosopher. He shows up the imperfections of biology as a science when contrasted with the physical sciences on account of lack of clearness and precision and the comparative absence of abstract thinking. He alludes to the program mapped out by that pioneer in physiology, Claude Bernard, that the phenomena of life, whether animal or plant, are in the last analysis physical and chemical processes harmoniously organized. It resolves itself into a study of the most elementary substance—namely, protoplasm. The difficulty arises that the term is still vague on account of its many components and our ignorance of their chemical and physical interrelations. The numerous variables involved render exact investigation extremely difficult. Nor will a pure mechanistic concept solve the problem. Protoplasm is never in a state of equilibrium. Though some consider biological concepts as metaphysical, the author deems it essential to include the adaptive principle of organic phenomena in a study of the biological sciences.

The subsequent chapters are devoted to a detailed exposition of the components and functions, the acid-base equilibrium, dissociation curves, cells and plasma, with a profusion of mathematical formulae, buttressed by personal experiments by the author and other workers in this field.

The blood as a physico-chemical system, the respiratory cycle, the blood and the circulation, the respiratory cycle, the blood in disease, and the blood in other species are chapter headings

in this book. They enter exhaustively into their respective subject matter; space forbids review, even briefly. In short, the book is a "quantitative description of the physico-chemical system of the blood in rest and work, in health and disease, and from species to species," also "the mutual dependence of the properties of the blood and of the circulation, respiration, and metabolism."

There is an appendix by Dill containing some technical hints, a bibliography, and an index.

The physiologist and biochemist will find it an indispensable addition to their library.

PHILIP HILKOWITZ.

The Rhythm of Sterility and Fertility in Women.

A discussion of the physiological, practical and ethical aspects of the Discoveries of Drs. K. Ogino (Japan) and H. Knaus (Austria) Regarding the Periods when Conception is Impossible and When Possible, by Leo J. Latz, A.B., B.S., M.D. Member of the Staffs of Loyola University Medical School and Alexian Brothers' Hospital; Lecturer at the St. Elizabeth Hospital and Mercy Hospital Training Schools for Nurses; Sec., The Cosmas and Damian Associates, Chicago. Second Edition. Published by Latz Foundation. (Corporation Not for Profit), Republic Building, Suite 1220, 209 S. State Street, Chicago, Illinois. 108 pages.

This nicely written little book formulates and champions the Ogino-Knaus or O-K theory. The author takes the very interesting and extensive independent studies of Ogino (Japan) and Knaus (Austria) and groups them together under the title, "The Ogino-Knaus or the O-K Theory." The physiological, practical, and ethical aspects of the subject are quite fully considered in separate chapters.

The physiology of the menstrual cycle, especially in reference to the fertility and sterility phases, is given for the purpose of showing how the limitation of intercourse to the ten days or less after and before the first day of menstruation provides "a natural method of limiting the size of families," which is not contrary to the teachings of the Catholic Church.

Most authorities, however, believe that exceptionally menstruation instead of occurring at the end of the luteal phase takes place at some other time in the utero-ovarian cycle. In other words menstruation is misplaced in the cycle. To this, Ogino, Knaus, Schroeder and others seemingly and Latz definitely take exception.

Evans and Swezy (Am. Jour. of Phys., Mar., '31) contend that all their experiments and all the literature show that ovulation always occurs "just before the completion of the growth phase of the endometrium" and at no other time. They take Schroeder's endometrial charts and show that exceptionally menstruation does occur at any time in the proliferation or glandular phases of the endometrial cycles. In other words, while ovulation is never misplaced in the utero-ovarian cycle, in a few cases menstruation is, and hence ovulation in these exceptional cases occurs at an indeterminate time in relation to the menstruation.

Latz limits the time of conception to seven days, thus: "Let us allow the 14th, 15th and 16th for ovulation; the 17th for the life span of the unfertilized ovum; the 12th and 13th for fecundation span of the sperm and the 11th for physiologic oscillations." This is based on the authority of Knaus and others' but it seems to the reviewer that it would be safer if the "12th to 16th" were

allowed for ovulation as Ogino does and two days for "physiologic oscillations," then the period of fertility would be the 9th to 18th instead of the 11th to 17th. For individuals whose cycles are more or less than twenty-eight days or irregular, separate instruction is given.

Barring the apparently abnormal cases in which menstruation is misplaced or the menstruations are irregular, the O-K theory seems to hold good, thus this book should be of great value in lessening marital burdens. Its contents should be known to all physicians so that they may be better able to assist their patients in determining their sterile periods or at least be able to intelligently discuss the subject.

T. MITCHELL BURNS.

A Text-Book of Pathology. By William Boyd, M.D., M.R.C.P.Ed., F.R.C.P. Lond. Dipl. Psych., F.R.S.C., Professor of Pathology in the University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Illustrated with 287 engravings and a colored plate. Philadelphia: Lea and Febiger. 1932.

This work is not an exhaustive treatise on the subject, but rather an introduction to medicine. In reading the book one does not think of the autopsy room with its odors and labeled jars of colorless specimens. You are transported to the patient's bedside where the author discusses with you the relation of symptoms to lesions. There may be a lack of minutiae as far as pathology is concerned, but there is wealth of practical material between its covers for the student of medicine.

A. W. FRESHMAN.

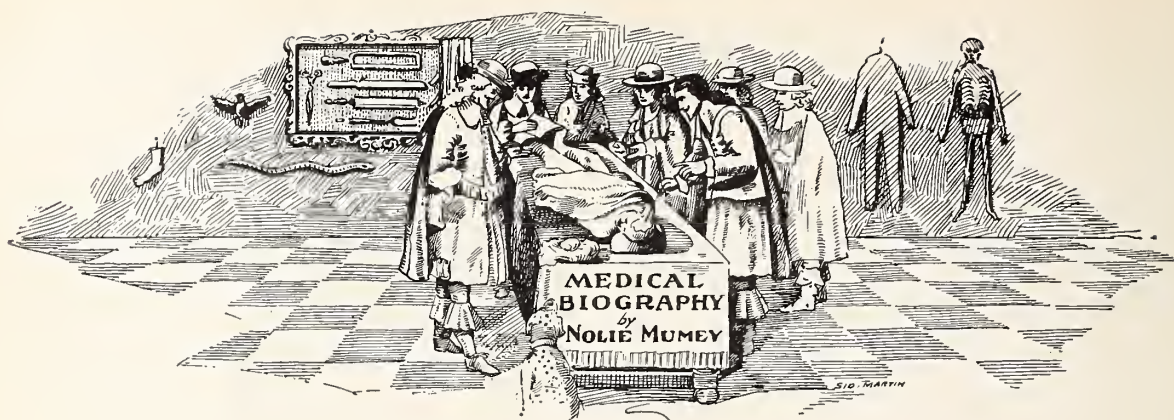
Asthma, Hay Fever, and Related Disorders. A guide for patients. By Samuel M. Feinberg, M.D., F.A.C.P. Assistant professor of Medicine and attending Physician in Asthma and Hay Fever Clinic, Northwestern University Medical School; Attending Physician, Cook County Hospital, Chicago. Illustrated. Philadelphia: Lea and Febiger. 1933. 124 pages, price \$1.50.

This small, cloth bound book of 124 pages is written in a lucid, straightforward style and for the purpose, as stated by the author, of giving to allergic patients and their families "a simple yet fairly thorough explanation of the subject." He accomplishes this purpose in a comprehensive manner and by the use of words which should be readily understood by the patient of average intelligence.

Most of the book is devoted to asthma as the best example of the allergic disorders, but the last two chapters describe allied conditions as hay fever, eczema, urticaria, abdominal allergy, migraine, and miscellaneous disorders, noting the similarities in the method of diagnosis and the treatment. The thorough discussion of asthma includes the symptomatology, etiology, both general and specific, diagnosis, and treatment. A chapter on special data gives lists of foods containing basic foodstuffs, as eggs, milk, and wheat, to which the patient may be sensitive. This chapter also mentions general means of avoiding irritating substances and even describes the preparation of dust-free rooms.

This book is further recommended for the endorsement of physicians in that it points out repeatedly the folly of self-medication without a physician's advice and warns of the complications that may arise from disregard or inadequate treatment of the various allergic disorders.

A. M. WOLFE.



SILAS WEIR MITCHELL

(Continued from April)

The French physiologist, Claude Bernard, inspired Weir Mitchell with enthusiasm which lasted until his death in 1914. A characteristic statement was made by Dr. Mitchell to a physician who came to see him relative to a hospital appointment. The young man told Dr. Mitchell that he had some fear of attempting to take advantage of the opportunity offered him. His reply was, "Never fail to accept any opportunity which will broaden your horizon."

Dr. Mitchell's fame as a physician perhaps rests most on his outstanding contributions to the study of nervous and mental diseases, and it may be rightly said that he was among the first to take up neurology as a specialty. Dr. Welch wrote of this part of his work as follows: "The study and description of peripheral nerve phenomena, especially those resulting from injury, constitute the largest, most original, distinctive, and important contribution of Weir Mitchell to neurology, and in this narrow field his work is comparable to that of Duchenne and Charcot upon diseases of the spinal cord."

Dr. Mitchell's therapeutic contributions deserve laudatory mention, especially the rest treatment, which was based on seclusion, rest in bed, full feeding, systematized movements, and electricity. His observations on injuries and diseases of nerves was a monumental work. He suggested nerve stretching and section, and was the first to describe a vasomotor neurosis, which he called *erthromelalgia*.

Associated with Drs. Morehouse and Keen, he made contributions to the knowledge of epilepsy, reflexes, nerve injuries, trophic disorders, malingering, and cutaneous nerve supply. He recognized overlapping nerve areas, and made a distinction between protopathic and epicritic sensibility. Other neurological discoveries were the cremasteric reflex, the relation of eye strain to headaches, the importance of ophthalmoscopic examinations in diseases of the brain. As a result of his contributions to nervous and mental diseases he became one of the original thirty-five members who organized the American Neurological Association.

S. Weir Mitchell as a physician has left a profound impression upon the medical profession. He will always be known as one of America's greatest neurologists. As Dr. Charles Frazier said of him, "He was a superior intellect. Yet through it all, as scientist, as wartime surgeon, as man of letters and poet, as devoted friend, Weir Mitchell was always and above all, the great physician."

Weir Mitchell's contributions were not limited solely to scientific investigations. His literary interest began in his boyhood days on the shelves of the library on Fifth Street in Philadelphia. His father took him there in order that he might have access to the proper kind of books, his mother previously forbidding him to read the "Arabian Nights." Many of the large volumes he carried home and spread on the floor to read. In his own words, "My habit was to lie on my belly on the floor of my room and read and read."

(To be continued.)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

Plan Now for the A.M.A. Meeting in Milwaukee

CIRCUMSTANCES combine to make the forthcoming meeting of the American Medical Association in Milwaukee more than usually attractive to Colorado physicians. It is closer to Denver than any A.M.A. meeting in years. It is handy to the Chicago World's Fair. Greatly reduced railroad rates are right in line with the times.

It is to be hoped that Colorado can better her record of the last two years, when in spite of the depression she showed a higher average of A.M.A. attendance than any comparable state. Though the year and the location were both unfavorable, our State Society sponsored a special Pullman to New Orleans in 1932, and all who took part vowed to arrange a similar excursion this spring.

Plans are therefore under way for a special car to leave Denver on the Burlington Aristocrat Saturday afternoon, June 10 (the official A.M.A. dates are Monday, June 12, to Friday, June 16). If a sufficient number of those who attend can unite on a time for the return trip, the special can be run both ways, as was the case last year.

Five reservations are already in hand for the special, which would seem to be assured. It is even possible that we might have two cars. It will be appreciated if doctors planning to attend the meeting, whatever their means or route of transportation, will notify the Executive Secretary.

The State Meeting Program Is Nearing Completion

AN OUTSTANDING program is being prepared for the Sixty-third Annual Session, to be held September 14, 15 and 16, 1933, in Colorado Springs. Several interesting innovations will be noted when the program is published.

The Committee on Scientific Work wishes it announced that, though the program is almost filled, there is still room for a few more good papers. Members of the Society who may have papers should let the fact be known at once, by writing to the Chairman, Dr. G. Burton Gilbert, Burns Building, Colorado Springs, or to the Secretary's office, 537 Republic Building, Denver. Requests for places on the program will be considered in the order of their receipt.

The Committee is fortunate in being able to

announce that Dr. Olin West, Secretary and General Manager of the American Medical Association, will be the honor guest of the Sixty-third Annual Session. Dr. West will discuss the problems presented to organized medicine by the report of the Committee on the Costs of Medical Care, under a title to be announced later.

Each forthcoming issue of Colorado Medicine will carry announcements concerning the Annual Session of interest to every member. Watch for them—and make plans now to attend and take part in the September meeting.



Advisory Committee Reports on Child Research Council

QUESTIONS raised by members of the State Society concerning the activities of the Child Research Council, conducted in cooperation with the University of Colorado School of Medicine, inspired the Society's Advisory Committee to the School of Medicine to make a thorough study and investigation of the institution.

At a meeting held April 19, the Advisory Committee unanimously adopted the following report and authorized its publication to the membership of the Society:

The Child Research Council

The Child Research Council is an organization for the study of children from birth to maturity, with the purpose of following the progress of normal development, and detecting the first dysfunction of any organ that is the beginning of disease.

Of the 100 cases now being studied, ninety-three are being treated by their own private physicians, seven attending clinics for their treatment. There are thirty-seven private physicians listed for these 100 children. The babies in this study are selected by the following criteria:

(1) To keep approximately equal number of boys and girls.

(2) To keep an approximately fair cross-section of the population of Denver and vicinity.

(3) Apparent permanence of residence in Denver and vicinity.

(4) Willingness of the parents (with the permission of their doctor) to cooperate by bringing the child in for periodic examinations.

(5) Agreement of the parents to cooperate in the various studies without expecting or requesting any form of advice or therapy from members of the Child Research Council Staff.

(6) No continual increase in the number of children.

If any abnormalities are noted in the progress of a given case the parents of the child are referred to their doctor and he receives a report of the abnormal findings.

Each child is examined every three months by means of general and special physical examina-

tion, x-rays, electrocardiograms, photographs, orthodontic studies and metabolism determinations. Once or twice a year he has other special tests such as psychometric or psychiatric studies.

The criticism has been made that such regular and thorough examinations cut down the number of visits which the parents of the child make to their own physician. That this may sometimes occur is undeniable. However, the number of visits to the physician is definitely increased whenever any abnormal findings appear. Also, the total number of visits possibly lost by any one physician in the course of a year is very small, when one realizes the distribution of these cases among the thirty-seven physicians. The knowledge gained by this study more than offsets the small loss of income suffered by any one physician.

Physicians are always welcome and urged to visit the work of the Child Research Council and to study any particular phase of the work in detail.

The doctor, who is not familiar with this work, and the Public do not understand the reason for the existence of this Council, due to the fact that in any research problem it often takes years of careful work before any definite results are obtained. This is not an organization to take the weights and measurements of children but a study of the function of the various organs of the body, as they develop normally under normal conditions.

We believe that within the next year or two the physician and public will begin to be rewarded for this careful work. For example, the work showing the relation of sinus infection to chest infection in the child has already been of inestimable value to the future health of the child and the adult.

This research has been in existence for the last twelve years. At first it was limited to one field of medicine, but in the last five years it has included all the various branches of medicine. This was accomplished by financial aid from the Commonwealth Fund of New York.

The financial support of the Child Research Council is not from taxation but from donation. The Commonwealth Fund at the present time is paying the technical employees, fellows, and the director, which amounts to \$30,000 a year. The supplies are paid by local donations, which amount to \$8,000 per year. The physicians on the staff give their time and energy gratis.

In summarizing our findings, the evidence shows:

(1) There is no actual cause for conflict between the Child Research Council and the practicing physicians of the state.

(2) The Child Research Council is eager to serve the state by making available increased knowledge concerning child development and health.

(3) Criticisms concerning the giving of treatments by members of the Council's staff and the decreasing of visits of the child to the private physician's office, are not founded on fact.

The Advisory Committee, in presenting the above findings to the membership of the Society, heartily approves of the administration and operation of the Child Research Council.

MEDICAL SOCIETIES

BOULDER COUNTY

The regular monthly meeting of the Boulder County Medical Society was held at the Elks Club in Longmont, Thursday, April 13.

Dinner was served at 6:30 and was followed by the scientific program. Dr. J. A. Matlock presented a paper on "Lesions of the Colon," illustrated with slides. Dr. M. W. Cooke read a paper on "Brain Abscess" and Dr. C. W. Bixler on "Lymphatic Leucemia." All three papers were discussed by the members. The Medical Economics Report was then read by Doctors F. R. Spencer, John Andrew and O. M. Gilbert.

M. L. JOHNSON,
Secretary.

* * *

DENVER COUNTY

The regular meeting of the Denver County Medical Society was held April 4 at the Colorado General Hospital. The scientific program was presented by the staff of the hospital. Seventy-four members of the County Society attended.

Dr. Frank E. Rogers presented a case of "Perforated Peptic Ulcer", the history of the case being presented by Dr. Anderson.

Dr. J. A. Philpott presented a case of "Hypernephroma." The findings and pathology were presented by Doctors E. A. Schmidt and W. C. Johnson. Dr. O. S. Fowler discussed the case.

Cases of "Nephritis" were presented by Dr. T. P. Sears and discussed by Dr. E. R. Mugrage.

Dr. Waring introduced Dr. A. D. Kaplan, who described the relationship between high infant mortality in certain sections of Denver with the incredibly poor housing situation. His talk pointed to one solution, through a definite re-housing program with the destruction of some 2,300 shacks where disease is rampant. This matter was discussed by Drs. Waring, Burnett, and Elder.

A motion by Dr. Waring that this matter be laid before the Public Policy Committee and that the question of toxin anti-toxin administration be taken up with the Public School Committee, both committees to inquire carefully and report back, was passed.

Dr. H. W. Stuver read the following resolution: "Inasmuch as the interests of the Medical School and Hospitals are closely interwoven with the medical profession, and inasmuch as the appropriation for the maintenance of the hospitals voted by the Board of Regents is considered by the hospital administration as insufficient to maintain a minimum standard of usefulness, I move that the president appoint a committee of three, one from the County Society representing the hospitals, and two representing the society as a whole, to look into the matter of appropriation, and if the amount appears insufficient, then to make recommendations to the Board of Regents and the Finance Committee of the Legislature to reconsider the matter." The resolution was referred to the Public Policy Committee.

A vote of thanks from the society was moved by Dr. Edward Jackson for the type and character of the excellent program which was presented by the Colorado General Hospital. Motion was seconded and passed.

The second regular monthly meeting of the Denver Society was held April 18 at the Capitol Life Building

The application of Dr. Kenneth Charles Sawyer was read.

Reports from the Public Policy Committee regarding the petition for parking privileges, and the re-housing condition were read and accepted.

The President announced the Woman's Auxiliary annual dinner dance and card party, planned for Saturday, April 29, at the Lakewood Country Club.

Members of the El Paso County Medical Society presented the scientific program as follows:

Dr. G. B. Webb presented an illustrated paper on "Pleurisy," which was discussed by Dr. Henry Sewall.

Dr. E. L. Timmons delivered an illustrated paper on "Some Observations on the Management of the Colorado Springs Nutrition Camp." The paper was discussed by Doctors Gengenbach, Amesse, Blickensderfer, Carmody, Minnig, Maul and Bronfin.

"Carcinoma of the Breast with Metastasis, Including Metastasis to the Heart," was presented by Dr. W. A. Campbell. Dr. Hegner discussed this paper.

The President expressed the thanks of the Society to the El Paso County Medical Society for presenting the Scientific program.

Ninety-three members attended the meeting.

O. S. PHILPOTT,
Secretary.

* * *

EL PASO COUNTY

The April meeting of the El Paso County Medical Society was held Wednesday evening, April 12, at the Colorado Springs Day Nursery.

Dr. Louis S. Faust of Denver was the guest speaker. His subject was the "Diagnosis of Colitis," illustrated with lantern slides. Dr. Frank B. Stephenson, president of the State Society, opened the discussion and a general discussion by members of the county society followed. Mr. Harvey T. Sethman, executive secretary, made a brief talk on "Medical Legislation."

CARL S. GYDESEN,
Secretary.

* * *

FREMONT COUNTY

Motion pictures showing the "Relation of Absorbable Sutures to Wound Healing," and "Surgical Treatment of Peptic Ulcers" were the principal features at the regular meeting of the Fremont County Medical Society, held Monday, March 27, in the Municipal Building at Canon City.

A. BEE,
Secretary.

* * *

LARIMER COUNTY

Dr. O. M. Gilbert of Boulder was the guest speaker at the regular meeting of the Larimer County Medical Society held Wednesday, April 5, at the College Cafeteria, Fort Collins. Dr. Gilbert gave an interesting talk on "Problems of Heart Disease."

DUANE F. HARTSHORN,
Secretary.

* * *

MESA COUNTY

Drs. J. S. Orr and F. J. McDonough were the guest speakers at the regular meeting of the Mesa County Medical Society held at the LaCourt Hotel, Grand Junction, March 21. Dr. Orr presented a paper on "Morals and Venereal Diseases" and Dr. McDonough on "Injuries to the Head."

Dr. William V. Watson of Collbran was the principal speaker at the regular meeting of the

Mesa County Medical Society, held April 18 at the La Court Hotel. Dr. Watson presented a paper on "Recent Calcium Therapy."

V. T. DeWAR,
Reporter.

PUEBLO COUNTY

The first April meeting of the Pueblo County Medical Society was held April 4 at the Hotel Congress. Mr. Louis Deesz gave an interesting talk on "The Present Status of Medicine in Russia."

Dr. W. W. Barber of Denver was the guest speaker at the second April meeting, held at the Hotel Congress, April 18. Dr. Barber delivered a paper on "Acute Abdominal Pain in Childhood."

J. L. ROSENBLOOM,
Secretary.

Obituary

Horace Granville Harvey

Dr. H. G. Harvey, Sr., was born in Saline County, Missouri, February 15, 1863. He received the B.A. degree from Central College, Fayette, Mo., and following his graduation he remained at that school for several years as an instructor in classical languages. In 1887 he received the degree of Doctor of Medicine from Washington University, at that time the Missouri Medical College. Dr. Harvey served an internship at the Saint Louis City Hospital in 1888, and in 1889 interned at Saint Louis Woman's Hospital, after which he entered private practice in Saint Louis.

In 1890 Dr. Harvey moved to Denver. Early in his practice in Denver he was appointed professor of anatomy in the Gross Medical College, and later Professor of Fractures and Dislocations, which chair he filled after the amalgamation of the Gross Medical College with the medical department of the University of Denver, forming the Denver Gross College of Medicine. When this school united with the University of Colorado in 1911, Dr. Harvey was appointed Professor of Surgery, which position he held until 1917. During the World War he served as an examiner for the draft board. He joined the Medical Society of the City and County of Denver in 1894, and had been active in medical organization continuously since that time.

Dr. Harvey died on April 15, 1933, as the result of a cerebral hemorrhage. He is survived by the wife and three sons, Dr. H. G. Harvey, Jr., Dr. Edward L. Harvey, and Thomas R. Harvey.

G. M. B.

WOMAN'S AUXILIARY

DENVER

The Woman's Auxiliary to the Denver County Medical Society held its annual President's Day on Monday, March 20, at the nurses' home of the Denver General Hospital. Over thirty-five presidents were present. Mrs. H. R. McKeen, president, introduced Mrs. Cardinal, who in the absence of Mrs. A. G. Fish, president of the Colorado Federated Women's Club, gave greetings and thanks from the various clubs. Mrs. Cardinal said that the Federated Women's Club was always

eager to give consideration to any project we may have for furtherance of public welfare. Mrs. Earnest Perrine, president of the Denver Federated Women's Club, and Mrs. S. E. Land, president of the Central District of the Federated Women's Club, also spoke a few words.

Mrs. John Ames, chairman of Programs, then took charge and introduced the first speaker, Dr. Merrill Jobe, whose topic was "Preventive Medicine and the Purpose of the Auxiliary." Because of the potent facts which Dr. Jobe lucidly gave, a brief summary will here be given:

The doctors of today are definitely "on the spot." They go to school and have the happy illusion that they will have a private practice upon graduation, which it takes them three years to get over. They then realize that each one is a public health officer from the mere event of making out a re-entry certificate for a neighbor's child who has had the measles (but of which he has not even been aware) to stepping forward in emergencies such as epidemics, or examining recruits during war. Of this "position" of public officer of health he should be proud. However, the public does not appreciate the doctor in this capacity. There is no other profession which lives and gives its services for the good of the public rather than financial gain as does the medical profession. In fact, it is hard to conceive of any man taking up medicine for financial reasons. Dr. Jobe demonstrated the scientific research leading to the discovery of smallpox vaccine through the study of cowpox and the discovery of a dangerous typhoid carrier which ably illustrated preventive medicine. However, seemingly more obvious facts, such as heart disease being not infrequently caused by bad tonsils, are not generally recognized. All know of the high fatality of diphtheria, the prevention of which is within the reach of all. Hiding behind religious shields is without avail. This can be proved by going to Montana, for example, where 80 per cent of the cases of Rocky Mountain Spotted Fever are fatal, and where religion hasn't helped the victims. Other diseases preventable and of which Dr. Jobe spoke briefly were tularemia, puerperal fever, brucella abortus infection, transmitted through unpasteurized milk and which formerly was confused with typhoid, rabies, cholera and tetanus. He then spoke of the transmissible venereal groups of disease which are avoidable. According to statistics, 80 per cent of the male population in the United States have contracted gonorrhea before their death; probably 10 per cent of the citizens have syphilis. This is inexcusable. Is it because of false policy? Dr. Jobe says no, but rather to lack of knowledge. During the war the United States army had more gonorrhea than any other army reported. This was a result of lack of knowledge. The requirement that each have medical treatment as soon as he was exposed brought results which proved that this was preventable.

In speaking of the future course of the Auxiliaries and the medical profession, Dr. Jobe mentioned the cults which have always been with us and always will be. He gave several examples of wrong diagnosis and treatment by chiropractors as evidence of their inability to be competent to have their own licensing board which they are demanding in Colorado, and which would lead to their practicing obstetrics and surgery as in California. This leads to the greatest duty of the Auxiliary, which is just becoming aware of this, as also are the doctors—the necessity of medical statesmanship. All doctors are reticent before a group, publicity being against their

ethics. They cannot advertise. But a change is taking place; the facts are being made known, then the people can choose.

After this helpful talk, Margaret Day Grubb and J. Allen Grubb, outstanding Denver musicians, gave a musical program.

The program of the afternoon was ended by Mrs. George B. Packard, Sr., taking us all on a delightful word trip through that fascinating and romantic isle, England, her subject being "Tea Drinking in England."

The meeting was then adjourned to tea.

MRS. D. W. MACOMBER,
Publicity Chairman.

LARIMER

Miss Ida Wray Ferguson, superintendent of nurses at the Larimer County Hospital, entertained the members of the Auxiliary to the Larimer County Medical Society in February. Mrs. Frank Carroll reviewed a report of the work of the national society meeting held in New Orleans. The auxiliary presented the hospital with a fruit shower, and the remainder of the evening was spent socially.

At the quarterly luncheon meeting held this month at Turner's Inn near Berthoud, Mrs. F. A. Humphrey of Fort Collins was elected president; Mrs. William Casser of Loveland, vice president; Mrs. Frank Carroll, Fort Collins, secretary, and Mrs. C. E. Honstein, Fort Collins, treasurer. These officers will assume their duties after the state convention. The program consisted of an author's reading by Mrs. Thad C. Brown of Fort Collins. In her reading she included the story, "Alosia's Star," a poem on Colorado's ghost town and an eastern poem, "Abiding" and "Ten Commandments for the Home." A social hour followed. The next regular meeting of the Auxiliary will be in June.

New Research Laboratory

Sir Henry H. Dale, C.B.E., M.D., F.R.S., director of the National Institute for Medical Research, London, was the principal speaker April 25 at ceremonies which marked the opening by Merck and Company, Inc., of their new research laboratory at Rahway, N. J. The program was opened with a welcoming address by Mr. George W. Merck, and addresses followed by Governor A. Harry Moore of New Jersey, Surgeon General Hugh S. Cumming of the U. S. Public Health Service, Lamot duPont, president of the Manufacturing Chemists' Association, and Josiah K. Lilly, representing the American Drug Manufacturers' Association. Sir Henry's address was entitled "The Relation of Research in Universities to Research Supported by Industry." Physicians, editors, and others from all parts of the United States and several foreign countries attended the opening.

Colorado State Medical Society Officers, 1932-1933

President: Frank B. Stephenson, Denver.

President-elect: Gerald B. Webb, Colorado Springs.

Vice Presidents: First, Walter W. King, Denver; Second, Lawrence L. Hick, Delta; Third, B. Franklin Blotz, Rocky Ford; Fourth, William P. Gasser, Loveland.

Constitutional Secretary: Lorenz W. Frank, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone KEystone 0870.

Delegates to American Medical Association: Senior, Crum Epler, Pueblo; Alternate, J. N. Hall, Denver; Junior, John W. Ames, Denver; Alternate, A. J. Markley, Denver.

<i>Councillors:</i>	<i>Term Expires</i>
District No. 1 Ella A. Mead, Greeley.....	1935
District No. 2 G. P. Lingenfelter, Denver.....	1934
District No. 3 George D. Andrews, Walsenburg (Chairman)	1933
District No. 4 W. W. Crook, Glenwood Springs.....	1936
District No. 5 A. L. Burnett, Durango.....	1937

Standing Committees, 1932-1933

Credentials: Lorenz W. Frank, Denver, Chairman; W. A. Campbell, Colorado Springs; Harold T. Low, Pueblo.

Scientific Work: G. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; James J. Waring, Denver.

Scientific Work: B. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; J. J. Waring, Denver.

Sub-committee on General Scientific Exhibits: C. E. Harris, Woodmen, Chairman; F. M. Heller, Pueblo; Maurice Katzman, Denver.

Sub-committee on Roentgenological Exhibits: W. F. Drea, Colorado Springs, Chairman; K. D. A. Allen, Denver; L. G. Crosby, Denver.

Arrangements: John B. Crouch, Colorado Springs, Chairman; T. R. Knowles, Colorado Springs; John B. Hartwell, Colorado Springs.

Public Policy: Walter W. King, Denver, Chairman; H. R. McKeen, Denver, Vice Chairman; Edward Delehanty, Denver; Gerrit Heusinkveld, Denver; A. L. Beagler, Denver; W. W. Harmer, Greeley; O. D. Groshart, La Junta; L. L. Ward, Pueblo; A. C. Holland, Colorado Springs; F. B. Stephenson, Denver, ex-officio; L. W. Frank, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

Publication: C. F. Kemper, Denver, Chairman; C. S. Bluemel, Denver; William H. Crisp, Denver.

Medical Defense: W. W. Wasson, Denver, Chairman; C. F. Hegner, Denver; T. D. Cunningham, Denver.

Medical Education and Hospitals: C. N. Meader, Denver, Chairman; K. D. A. Allen, Denver; H. A. Black, Pueblo.

Library and Medical Literature: E. D. Downing, Woodmen, Chairman; Carbon Gillaspie, Boulder; F. W. Kenney, Denver.

Co-operation With Allied Professions: Harry S. Finney, Denver, Chairman; George R. Warner, Denver; John Andrew, Longmont.

Medical Economics: C. E. Cooper, Denver, Chairman; C. F. Kemper, Denver; Philip Hillkowitz, Denver.

Necrology: G. M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; Lee Bast, Delta.

Special Committees, 1932-1933

Postgraduate Clinics: Maurice H. Rees, Denver, Chairman; O. M. Gilbert, Boulder; C. E. Harris, Woodmen; Nolie Mumey, Denver; G. E. Cheley, Denver.

Workmen's Compensation Affairs: A. S. Cecchini, Denver, Chairman; L. G. Crosby, Denver; W. R. Waggener, Denver; J. D. Carey, Fort Collins; Lanning E. Likes, Lamar; D. H. O'Rourke, Denver; John Andrew, Longmont.

Veterans' Legislation: J. W. Ames, Denver, Chairman; E. B. Liddle, Colorado Springs; Crum Epler, Pueblo; L. H. Winemiller, Denver; Louis V. Sams, Denver.

Advisory to the School of Medicine: John S. Bouslog, Denver, Chairman; N. A. Madler, Greeley; C. O. Giese, Colorado Springs; C. E. Sidwell, Longmont; T. D. Cunningham, Denver.

State Registration Fee: R. W. Arndt, Denver, Chairman; Frank E. Rogers, Denver; T. E. Beyer, Denver.

Constituent Societies

Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Crysler, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, C. Rex Fuller, Salida.

Crowley County—First Wednesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, R. B. Porter, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, G. M. Noonan, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—Third Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Thursday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

President, F. L. Beck, Cheyenne

President-elect, H. L. Harvey, Casper

Vice President, J. L. Wicks, Evanston

Secretary, Earl Whedon, Sheridan

Treasurer, Evald Olson, Meeteetse

Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne

Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas

Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

State Board of Health

THE first meeting of the newly-appointed Board of Health was held at the Capitol April 17 and 18. The board organized by electing Dr. Earl Whedon president and Dr. J. R. Nagel vice-president. Dr. W. H. Hassed is State Health Officer and Drs. Bernard McDermott and Evald Olson were the other members present.

The Board spent two very busy days in this first session. Appointments of County Health Officers and Registrars of Vital Statistics were made as follows: Albany, Dr. R. M. Leake; Big Horn, Dr. S. L. Myre; Campbell, Dr. J. C. McHenry; Carbon, Dr. C. W. Jeffrey; Converse, Dr. J. R. Hylton; Crook, Dr. J. L. Bostwick; Fremont, Dr. Paul R. Holtz; Goshen, Dr. O. C. Reed; Hot Springs, Dr. R. W. Hale; Johnson, Dr. W. J. Knebel; Laramie, Dr. G. M. Anderson; Lincoln, Dr. J. C. Newman; Natrona, Dr. J. C. Kamp; Niobrara, Dr. G. D. Murphy; Park, Dr. Frances M. Lane (County Health Officer), Dr. Evald Olson (Registrar of Vital Statistics); Plate, Dr. C. E. Fish; Sheridan, Dr. Earl Whedon; Sublet, Dr. J. W. Montrose; Sweetwater, Dr. E. S. Lauzer; Teton, Dr. Charles W. Huff; Uinta, Dr. J. H. Holland; Washakie, Dr. Paul S. Reed; Weston, Dr. Fred Horton.

The appointments were not made along strictly political lines as in other administrations, but almost half of the County Health Officers are Republicans. It was the aim of the Board to select men and women best qualified to serve. These appointments are made subject to change by the Board and not for any certain term.

The Board requested all doctors who have been furnished the Government Tick Vaccine free not to charge more than one dollar per person for their services. This action was taken because of the limited supply of vaccine and because as a rule most of those exposed are the one who have been out of employment a great deal and are unable to pay a normal fee. If any doctor has vaccine he is not using, the Board requests that he return it to his County Health Officer so that every drop can be used this year, as it is evident that there will be a demand for vaccine beyond the government's capacity to supply it.

Plans were made to insure better inspection of camping places and tourist camps by the County Health Officers and the State Health Officer. The sanitation of the new forest laborer's camps also will be looked into by the County Health Officers and the men will be examined before going into the government work. The details for this service have not yet been worked out by the national and state governments, but will be announced as soon as made.

Cardiospasm or Diaphragmatic Hernia?

THE ETIOLOGY of cardiospasm is not yet settled and the literature on the different theories is extensive. A great many cases of each condition present very similar symptoms.

The x-ray studies are often helpful and the passage of the new esophageal dilators under direct visualization aids in the differential diagnosis. The old unsettled question of spasm or stricture as being the true

condition in so-called cardiospasm is still discussed, but the principal diagnostic points for the general practitioner are as follows: First, in cardiospasm the regurgitation of food is spontaneous. By that we mean that without warning the patient finds the food in his mouth, especially when the prone position is assumed. Often there is no warning in cardiospasm, whereas in hernia of the stomach there is distress before the food is regurgitated. Second, under the fluoroscope in cardiospasm the barium meal is shown in the dilated esophagus and a thin stream can be seen to trickle into the stomach at intervals.

Third, the normal outlines of the stomach below the diaphragm are seen in cardiospasm, but often beautiful pictures of the herniated stomach are seen above the diaphragm and below in diaphragmatic hernia of the stomach.



Loyal Friends

YE EDITOR has always loved the mountains, and for years he has travelled all over the beautiful Big Horns in Wyoming. A few weeks ago he travelled along a new range and came very near entering the valley of death. Fortunately he met some skilled guides who tenderly led him back home. An attack of pneumonia was the cause, and to Doctors Crane, Steffen, and Johnson of Sheridan and Dr. Hillkowitz of Denver we acknowledge our debt of gratitude. It seems one has to be really sick to realize the number of his true friends.

We are truly thankful for their kindnesses.

WYOMING NEWS NOTES

LANDER

Dr. Paul R. Holtz of Lander, Wyoming, who has not been well for some time, was taken seriously ill at his home, and was removed to The Wheatland Hospital where on April 18 he was operated for a gangrenous gall-bladder. His convalescence will no doubt be tedious, but his many Wyoming friends will be glad to learn that his condition is reported as satisfactory.

LARAMIE COUNTY

The 1932 officers of the Laramie County Medical Society were re-elected for 1933: Dr. G. A. Fox, president; Dr. W. R. Day, treasurer, and Dr. W. K. Mylar, secretary. The doctors in Cheyenne meet monthly as the staff of the Memorial Hospital. However, at the first meeting of the county medical society this year it was decided that the society should hold monthly luncheon meetings in addition, and a committee was named to make the arrangements. At the March 17 meeting, every member was present. Dr. H. L. Lucic gave an interesting account of his recent trip abroad.

JOINT MEETING, SHERIDAN COUNTY MEDICAL SOCIETY AND YELLOWSTONE VALLEY MEDICAL SOCIETY

The Sheridan County Medical Society and the Medical officers of the U. S. Veterans' Administration Hospital No. 86, jointly greeted twelve members of the Yellowstone Valley Medical Society at this hospital on Friday, March 24, 1933. A luncheon was served to all in the hospital dining room, after which, under guidance of the medical officers, an inspection of the new seventy-five-bed general hospital installation was made. Much admiration was expressed by all the visitors at the fine arrangement of the building and the late model types of apparatus which were shown. The building has not, as yet, been used due to the recent economy orders issued by the President.

The group was then conducted to a ward of the new building where a Neuropsychiatric Clinic was held, Dr. A. E. Brownrigg, medical officer in charge, presiding. The following subjects were very ably taken up, each with case presentations:

Paresis and other forms of Neurosyphilis, by Dr. A. F. O'Connor; Forms and Stages of Dementia Precox, by Dr. C. H. Burdick; Type Cases of Mania and Mental Depression, by Dr. J. H. Price; Encephalitis Lethargica with Mental Symptoms, by Dr. Thos. G. McLin, Clinical Director. After a short discussion the meeting adjourned.

Those present from Billings were as follows: Doctors H. H. Culbertson, Andrew Clark, J. H. Bridenbaugh, Roy V. Morledge, J. J. Wernham, C. H. Nelson, P. E. Griffin, G. M. Russell, J. C. Figenshau, L. S. Stevens, W. R. Morrison, E. M. Farr. Sheridan was represented by Doctors Crane, Denison, Roberts, Stevenson, Meredith, P. M. Schunk, W. F. Schunk, Veach, Stewart, Steffen. The officers of the Veterans' Administration Hospital are: Doctors A. E. Brownrigg, T. G. McLin, A. F. O'Connor, C. H. Burdick, J. H. Price, Mott and Croup.

It was with the deep regret of all present that the absence of Doctor Earl Whedon was felt, as he had been the prime mover in getting the organizations together. He was ill in the local hospital with pneumonia. Happily he has since recovered and returned to his home.

LAWRENCE C. MEREDITH,
Secretary of the Sheridan County Medical Society.

When inserting a stomach tube, give the patient a basin to hold in his lap. This will aid in keeping his hands occupied and out of mischief.

Take this Journal home to your wife.

POSTOPERATIVE PARALYTIC ILEUS

FRED W. PHIFER, M.D.
and HAROLD B. RAE, M.D.
WHEATLAND

The literature on paralytic ileus is extensive, and almost every month sees a new contribution in the current surgical periodicals. Nevertheless, we make no apology for presenting the following comments on the subject, because we feel that we have made practical progress through the years in the handling of this complication, the constant dread of every abdominal surgeon, whether he be the chief of the surgical staff in a modern hospital or that braver soul who must do the best he can for emergency cases at the country cross roads.

The title "paralytic ileus" is, we believe, a misnomer. A true uncomplicated intestinal paralysis following operation has not been observed in my thirty years of surgical practice; neither have I been able to produce such a condition in our experimental dog work; nor has it regularly developed in the cases where it might have been reasonably expected to develop. On the other hand, an adynamic ileus following operation—that is to say, a marked intestinal inactivity with enlargement of the abdomen accompanied by nausea and vomiting—has developed where least anticipated.

It is true that in this condition classed as paralytic or adynamic ileus, where we have nausea, vomiting, and undue abdominal distension following operation, we do find a certain denervation or innervation of the muscular walls of the intestines, so that even though we do perform an enterostomy the contents do not seem to escape. As a rule in such a case, when the gut is opened, it collapses only a short distance back from the opening, and it does appear to be more or less devoid of peristaltic action. Nevertheless, this cessation of intestinal activity is not the disease, we believe, but is merely a symptom, just as the vomiting is. Call the condition paralytic ileus, if you like, but in our opinion it is primarily due to an infection, a peritonitis, which may be of a low grade or acute, local or generalized, of a fulminating type or of long duration, from

which the patient may or may not recover, with or without a secondary operation. Of course, it is understood that peritonitis is not always accompanied by this peculiar form of intestinal paralysis and abdominal distention; but in our experience with this condition a part of the picture has been an infection involving the peritoneum.

The first necessity is a clean cut diagnosis, definitely differentiating this condition from dynamic ileus of mechanical obstructive origin. In the mechanical type, a successful outcome in the majority of cases depends upon a prompt diagnosis and an early operation to relieve the obstruction. Nevertheless, here we wish to digress in order to call your attention sharply to dearly bought experience. In all cases of mechanical ileus where diagnosis has for any reason been delayed, or even in supposedly early cases where there is retention above the obstruction, especially in the upper two-thirds of the small intestine, before taking any measure for immediate relief of the obstruction, an enterostomy should always be done to drain this portion of the intestinal tract of the toxic material retained therein above the obstruction. This pent-up material is so highly toxic that if it is allowed to flow down into the unobstructed portion, which up to this time may be called normal intestinal tract, it may produce a fatal ending in what appeared to be a hopeful case. This enterostomy, for the time being, is even more important than the relief of the obstruction. In fact, if we should accidentally relieve the obstruction before getting the enterostomy done, we think we would throw a ligature around the gut, until we could complete the enterostomy. We have seen a mechanical obstruction successfully relieved, the contents of the upper gut pass on and the vomiting stop; nevertheless, without any distention the temperature continued to mount to 104°, 105°, 106°, 107°, even to 109°, and within twelve hours the patient died.

The obstructive cases of ileus may occur

in patients on whom no abdominal operation had ever been performed; or they may occur immediately following an abdominal section; or they may occur days, weeks, months or even years afterward. The non-operative case or the case that has undergone a laparotomy some time ago does not usually present a difficult type upon which to make a differential diagnosis; neither does the differential diagnosis present insurmountable difficulties even in the cases where abdominal operation has been fairly recent. Such cases may come to us in fairly good condition, especially if we see them during the early part of the illness.

But the case that taxes the judgment of even the most experienced surgeon is the one that develops abdominal complications immediately following an operation, the case wherein the patient's life depends upon an early correct diagnosis and an immediate radical operation if the ileus be truly obstructive; but in which, on the other hand, conservative treatment is imperative if the ileus be of the adynamic type.

What surgeon will say that diagnosis is easy in these immediate postoperative cases that are not doing well, where the differential diagnosis is narrowed down to a choice between mechanical ileus and paralytic ileus with peritonitis (for we repeat that we think we always have some degree of peritonitis in the so-called paralytic ileus). We'll grant it is easy in a typical case, just as it is easy to make a diagnosis of tuberculosis on the walking skeleton on the street who stops to expectorate every few minutes, but also just as difficult as to make a diagnosis of incipient tuberculosis in a patient presenting signs and symptoms of many other conditions that it might just as easily be. Such a case is a test of one's ability to recognize and interpret the clinical data. The x-ray and laboratory findings may be interesting and confirmatory, but it is on his clinical experience that the successful surgeon must depend in these cases.

In either form of ileus drugs, other than supportive measures and sedatives, have no place. Often most valuable time, even in fact the sole chance of the mechanically ob-

structed patient, is lost by listening to some over-enthusiastic medical man; or sometimes it may be to some surgeon, temporizing with drugs, either because he is not sure of his diagnosis or has not the fortitude to meet an emergency when it comes to the show-down. It takes the nerve that comes only with the courage of your convictions to go back into the abdomen of a newly operated patient, especially one of your own cases.

The frequency of postoperative complications is in close ratio to the skill and care of the surgeon. Like Admiral Byrd's successful explorer who has no adventures, the experienced surgeon meets with fewer complications. On the other hand, with as perfect surgical technic as possible, an occasional case of paralytic ileus is just as sure to happen as an occasional phlebitis, embolism, or parotitis. The ideal way to treat such surgical complications is not to allow them to happen; but happen they will at times, despite the most exacting precautions. Happy is the surgeon who can save his patient after one of these dreaded complications has developed.

In this connection, we repeat again that we are confident that paralytic ileus is due to a newly developed peritonitis, either of traumatic origin, avoidable or unavoidable, or else due to causative factors that may have been pre-existent or that may have been introduced at time of operation.

In our experience the mental condition of the patient has little bearing on the case. It may be that the nervous, apprehensive type of individual is more susceptible to this intestinal postoperative complication, but we have not found it so. If all the patients who have had premonitions of death went on to a fatal ending, our surgical mortality rates would be much increased. We have seen but one operative patient who died for no demonstrable reason except a rather calm certainty that she was going to die, although we very nearly lost one other patient who apparently had no other complication than sheer fright. Neither of these cases developed an ileus. At any rate, we have not seen fear as an apparently causative factor in paralytic ileus. In fact, in the earlier stages,

these patients are apt to appear not very ill. Restlessness and mental perturbation are, however, often seen as early symptoms in mechanical ileus and may be the very first symptom of such an impending difficulty.

Preoperative "preparation" in the form of purgation may have a bearing, however. When patients inform us that they have prepared themselves for operation, we usually put them to bed and delay operation for several days, if possible. In surgical cases, we give no purgatives, either in preparation for operation or postoperative, relying upon Nature assisted by enemas to empty the bowel.

Trauma during operation is, of course, unavoidable. It is merely a question of degree. There can be no manipulation so gentle that the peritoneum will not resent it. But it is possible to avoid "tremendous retractors energetically used by stalwart internes." Except where absolutely necessary, we have largely discarded the use of retractors and voluminous gauze packs, with gratifying results. In certain cases, with a short mesenteric attachment, it is difficult to operate without pull on the mesentery, but the less the better. Careful separation of adhesions along lines of natural cleavage, sharp dissection where this can be done, the gentlest possible and the least possible manipulation, delicacy and gentleness of touch rather than speed—all these will help to cut down the incidence of postoperative ileus.

Nevertheless, every abdominal operation is a potential case of adynamic ileus. In fact, perhaps it is true that every such case does develop ileus, differing only in extent. We believe that "gas-pains" are manifestations of a minor degree of such a complication, and postoperative vomiting may often be another. Immediate attention to such clouds on the horizon may prevent a storm, or lessen its severity.

In the treatment of paralytic ileus in this clinic, we have discarded radical measures, unless "masterful inactivity" should be called radical. Surgical measures are not resorted to, except where specifically indicated, as for example, drainage where there is reason to suspect a localization of pus.

However, where there is distention, if a drain has not been left in at time of operation, it is our custom to clip a stitch at the lower angle of the wound, and insert a Penrose cigarette drain well inside the peritoneal cavity. From this procedure there is practically always a flow of sero-sanguinous fluid, sometimes sufficiently free to afford considerable relief from intraperitoneal pressure. Smears or cultures from this fluid also often give us positive findings of value.

With the above exceptions, we institute a definite routine treatment along lines of conservative, non-operative care. Upon the very first intimation of any gastric disturbance, all oral administrations are discontinued. With the anesthetic in use in our clinic, postoperative nausea and vomiting is so little to be expected that its appearance is an alarm signal to which we give immediate heed. The rectum and colon are emptied by a copious enema, siphoning off with the rectal tube if necessary, with especial watchfulness for the passage of any gas or fecal matter. This is repeated not oftener than once, or possibly twice, in every twelve hours. The importance of these enemas can scarcely be exaggerated in reference to the information obtained if they are properly given. In my day I have personally assisted in their administration many hundreds of times in order to have first hand knowledge of conditions; and over and over I have lectured to my nurses on the subject of how to give enemas and what to look for to report.

If nausea and vomiting persists, stomach lavage is instituted and repeated; or even better, the tube is left in place, if this procedure does not too much disturb the patient. But for this, get the patient's cooperation, since few things will do more harm than to fight a patient with this condition. Of course, if it is a matter of life and death, the good surgeon will handle his patient. Supportive measures are at once instituted. Glucose is given intravenously, and saline as needed to combat dehydration, but with judgment to avoid overloading the system. Our experience has been that insulin administered with the glucose is beneficial, the rate

being one unit of insulin for every two grams of glucose. We have even had patients who themselves recognized the difference between glucose administered with and without insulin. The beneficial results of glucose are transient, so it should be given both with and independent of the saline, and at shorter intervals. We have found it convenient to use the glucose put up by the manufacturers in ampoules ready for intravenous administration. Saline is also prepared in this way for intravenous use or may be given with satisfactory results subcutaneously. Nothing is given by mouth and nothing by rectum, except the daily cleansing enema which is siphoned off if not voluntarily returned.

Murphy drip is definitely contra-indicated, we believe. In the first place, the absorptive powers of the bowel mucosa are so much lessened that only a small amount of the fluid would be taken up by the system; and in the second place, a peristalsis is set up that is positively detrimental, except in beginning convalescence. The proceeding annoys the patient and interferes with rest, causing colicky pains that further disturb the patient, and does definite harm by setting up an active peristalsis of the upper intestinal tract which, without an outlet, will only increase the distention and aggravate an already serious condition. After the storm is over, Murphy drip may be very efficacious; if by accident it is started just at the time the disturbance is subsiding, it sometimes gets undeserved credit for doing something wonderful. We use Murphy drip only where we want to stimulate peristalsis and for no other purpose whatever. We use glucose in our Murphy drip as an additional peristaltic stimulant.

As soon as we are reasonably sure of our diagnosis, we begin the application of heat to the abdomen. All dressings are removed except a thin layer of gauze and a thin sheet of pure gum tissue immediately covering the incision and sealing it as closely as possible. The remaining portions of the abdomen are generously anointed with a mixture of sterile camphorated oil and turpentine, then covered with a sterile flannel cloth wrung out

of hot water with gloved hands. Over this another pure gum rubber sheet is placed, and then an electric pad applied. If you prefer silkoid to gum-tissue for sealing purposes, this may be used. Over top of the electric pad, the abdomen is encased in a smooth binder. The old-time large flax seed meal poultice had much to recommend it, but we have reluctantly discarded it on account of its cumbersomeness, the incorporated danger of infection and the great difficulty in keeping the poultice warm and moist without disturbing the patient.

Morphine is a part of our routine treatment in all postoperative cases for at least seventy-two hours after operation. In this particular type of complication it is kept up for an indefinite period, depending entirely upon the length of time of the disease. We are aware that this is condemned by many authorities, but in the average case we have found it ideal for the relief of both mind and body. It is really surprising to see what beautiful results may be obtained by small, routinely repeated doses of morphine with the addition of atropin in small amount to every third dose.

We have not found spinal or splanchnic anesthesia of any value as a postoperative measure, except as anesthesia per se if secondary operative measures are felt to be imperative, but even here we prefer a general anesthetic. We have not found it a curative or even helpful measure in these desperate cases of abdominal distention, and its administration is easily capable of doing definite harm. Like the Murphy drip, we feel that spinal anesthesia is sometimes given just as the storm is subsiding, so that it receives credit not due, like the chiropractor's spinal adjustment for a renal colic about to be relieved by Nature's method. We would also suggest that the securing of a bowel action or the passage of gas after a spinal anesthesia is sometimes misleading, so that it is scarcely to be depended upon.

Pituitrin is to be mentioned only to be condemned. We have never seen it do any good. We think we have seen it do harm.

As to bacteriophage, we are at present too remote from any of the great research lab-

oratories for an effective trial. The commercial bacteriophage is not as yet recommended. It is kept on hand at all times in this clinic, but up to this date indications for its use have been limited.

The laboratory is of the greatest importance in the diagnosis and treatment of these cases, especially in supplying valuable information as to the virulence or the progress of the case. In most of these adynamic cases, neither the temperature nor the leucocyte count have been high. On the contrary, many ran a low temperature with a leucocyte count under twelve thousand and with a normal differential count. The blood chemistry is interesting, but not to us of any very great clinical significance. On the contrary, routine postoperative blood-cultures do yield information that is often very valuable, indicating the underlying type of organism with which we have to deal.

In these cases, the assistance of a well-trained nurse is indispensable. To make a diagnosis in the first place a good nurse is invaluable; one who has had real training in the giving of a proper enema, and who can give a really intelligent report of the results. To carry out the line of treatment outlined in this paper, a good nurse is also a necessity. She must understand what she is doing, why she is doing it, and how to do it; and above all, she must know how to tranquilize her patient and to save him every unnecessary exertion without seeming to do so. We usually order the nurse not to stay with the patient but to keep him under such close observation that a hand could not be lifted without her knowledge.

The period of high tension in such a case is usually limited to a week or ten days, then begins to subside. The abdomen becomes more soft, the nausea and vomiting disappear, intestinal peristalsis gradually returns, and soon we have the nurse reporting that the patient has had a large liquid evacuation with much gas. In fact, at times this evacuation may be of such large amount and so sudden that the patient is not able to control it, and the nurse records it as involuntary. After such an event, improvement is usually fairly rapid, and both the patient

and the surgeon relax and once more begin to enjoy life.

Last year, out of more than seven hundred operations, we had two cases of pronounced postoperative ileus, both of which recovered with apparently no bad after effects. During the past ten years, we have found that this conservative way of handling this dreaded complication has given us a high rate of recovery.

There Are No Doctors in Sing Sing

The "Presbyterian Banner" asked Jane Addams and Frank J. Loesch, nationally known citizens of Chicago, each to name "the ten men who have contributed the most to the progress of Chicago during its first century." The list of ten submitted by Attorney Loesch, famous for his warfare against enemies of law and order, included two physicians: Daniel Brainard, a leader in the establishment of the first general hospital, the first medical college, and the first medical journal in Chicago; and Charles V. Dyer, early physician and abolitionist.

From the "Banner" we learn also that there are no editors, lawyers, ministers or physicians among the inmates of Ossining prison. "We may grant," continues the Editor, "That there are some members of all these professions that ought to be there, and still be thankful that their record is so good in this respect." Continuing, he states: "The prison is a very crude approximation to social justice, but it is the best we can do at present."—Pittsburg Medical Bulletin.

Within the past fifteen or twenty years, hospitals have gradually sought to broaden their scope of endeavor. Free clinics were established with medical staffs, and free professional and hospital care is being provided for a certain class of patients. There is nothing wrong in that, provided the service is rigidly limited to those who are in dependent circumstances.

Hospitals are nursing institutions. They were established to provide facilities for rendering care and to enable the doctors to more ably institute medical and surgical treatments.—Jour. Mich. State Med. Soc., March, 1933.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

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THE outcome of any tuberculous infection depends upon the resistance offered by the body. Whatever subtracts from the patient's physiological resources presumably hinders recovery. Concurrent disease of any kind places a handicap on the tuberculous patient. Syphilis is widely prevalent, tends to be chronic, is often undiscovered, and frequently masquerades as something else. To what extent does syphilis complicate tuberculosis? Oscar Orszagh of Budapest summarizes in "Tubercle" of January 1933, certain statistics, conclusions and implications bearing on the coexistence of tuberculosis and syphilis. The following abstract of his article was prepared by the American Social Hygiene Association.

PULMONARY TUBERCULOSIS AND SYPHILIS

Deaths from syphilis rank high: in England 10 per cent, in France 16 per cent, in the United States 17 per cent, of the total mortality can be traced to syphilis. On the other hand a study of a group of luetic patients in Germany indicated that 26.67 per cent of them died of tuberculosis against 22.5 per cent dying of syphilis. Similarly, in Finland of 734 syphilitic patients, 25 per cent died of tuberculosis while only 15 per cent died of syphilis. Post-mortem examinations of 500 cases of syphilis showed that the cause of death was tuberculosis in 10.6 per cent of cases. These and other statistical studies and clinical observations indicate that syphilis hastens the progress of tuberculosis.

Because of the frequent coexistence of tuberculosis and syphilis, it is important that a careful search be made in tuberculous patients for evidences of syphilis. This search should include as an important feature, a careful history with repeated questions on subjects which might bring syphilis to light, as for example, history of primary sore, rashes, miscarriages and family histories. At the Queen Elizabeth Sanatorium in Budapest, only 1.7 per cent of the tuberculous patients having syphilis gave a clear history of this disease, while the total number found to have syphilis on the basis of history, and serological and clinical examinations was 9.3 per cent of all the patients in the sanatorium. It is desirable to examine the blood of the tuberculous patient routinely at least once and preferably oftener and to employ two

tests as for example the Wassermann and one of the precipitation tests, bearing in mind always that the blood test may be negative even in the presence of syphilis. Orszagh does not think it necessary to examine the spinal fluid in the majority of cases, a judgment with which the reviewer does not fully agree.

Similarity of Symptoms and Lesions

A good many luetic conditions are mistakable for tuberculosis. Thus, there may be general systemic manifestation in early syphilis such as loss of appetite, paleness, raised temperature, headache, chest pains, gastric disturbances and jaundice, symptoms which resemble those of tuberculosis. In the secondary stage of syphilis patients may suffer from bronchitis and sore throat. Usually the lymphatic nodes are enlarged especially those of the groin and neck, and enlarged hilar lymph nodes are not rare in syphilis. Chronic syphilitic skin lesions and chronic syphilitic laryngitis are occasionally mistaken for tuberculosis. Pulmonary syphilis can cause alterations of lung tissue quite similar to those of tuberculosis. Disseminated gummata may resemble miliary tuberculosis, ulcerated gummata may resemble cavitation of tuberculosis. Histologically the lesions of pulmonary tuberculosis and of pulmonary syphilis may be indistinguishable. It is to be borne in mind that the two diseases may be present in the lung at the same time.

Simple pulmonary syphilis does not occur so

often as the clinicians and roentgenologists diagnose it. Neither is it so rare as the pathologists at present take it to be. The diagnostic difficulties are to be overcome only by exact systematic clinical, serological and X-ray examinations. Special significance is attributable to negative sputum, positive Wassermann, characteristic history and the good effects of anti-luetic treatment in arriving at a working diagnosis of pulmonary syphilis.

Syphilis Delays Cure of Tuberculosis

Tuberculosis at the Queen Elizabeth Sanatorium gave in general a graver prognosis in the presence of syphilis. The longer the intervening period between the outbreak of the two diseases, the less harmfully does lues influence the course of tuberculosis. In judging the effect of syphilis on tuberculosis, it is important to know what the condition of the lung was when syphilis was acquired and whether it has become worse. If the pulmonary lesions are old and healed, or if the patient is in good condition, syphilis as a rule does not affect this condition. But in the case of badly nourished old persons with little capacity for reaction, syphilis can attack the system to such an extent that the latent tuberculosis may be reactivated and become fatal.

In the same way, aggravation may follow fresh luetic infection in the case of persons whose lung trouble was extensive, but which had only showed slow progress till then. If a person suffering from active tuberculosis acquires fresh luetic infection,



GUMMATOUS LYMPH NODES
(Congenital Syphilis)

Cases such as the one illustrated above are sometimes mistaken for tuberculosis.

and his bodily resistance is weak, then the illness may have a very serious course, though it is also possible that the disease may later calm down and the prognosis become more favorable. Persons suffering from antecedent lues may react to fresh pulmonary tuberculosis infection just as healthy persons would. Tuberculosis becomes fatal only if the lues causes lesions which disturb the working and vitality of the whole body, as for example cardiovascular lesions.

Treat Syphilis with Discrimination

In the case of pulmonary syphilis the treatment of syphilis should be energetic. In the case of pulmonary tuberculosis complicated by syphilis, the treatment of syphilis should be cautious. In the choice of correct doses, the patient's general condition and the character of the pulmonary lesions are extremely important factors. With a weakened constitution, and active recent and exudative tuberculosis, the treatment of syphilis should be delayed until the general tuberculous condition has improved and it should then begin with small doses of bismuth. In the presence of fibrous pulmonary lesions syphilis may be treated safely with larger doses of bismuth, and neoarsphenamine may be used in moderate doses beginning with .15 grams and going up to .45 grams. Surgical treatment of tuberculosis is not barred by the presence of syphilis provided anti-luetic treatment is administered.

Pulmonary Tuberculosis and Syphilis, Oscar Orszagh, Tubercle, Jan., 1933.

Tuberculosis and Syphilis Compared

	TUBERCULOSIS	SYPHILIS
Essential lesion	Tubercle	Gumma
Essential pathology	Destruction of tissue	Replacement of active with inactive tissue
Prevalence	About .7% of population (active cases)	About 5% of population
Diagnostic criteria	History, symptoms, physical signs, tuberculin test, X-ray, discovery of organism	History, physical signs, blood test, X-ray, discovery of organism
Prognosis	Good with early treatment	Good with early treatment
Treatment	General: rest, nutrition, hygiene, collapse	Specific: arsenicals, bismuth, mercury

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EDITORIAL NOTES AND COMMENT

E. Pluribus Unum?

IN HIS book concerning the prolongation of human life, Metchnikoff referred to the "Human Dysharmonies."

Colorado's Twenty-ninth General Assembly, so recently adjourned, exhibited more unique examples of "Human Dysharmony" than one would have thought possible to assemble. A Democratic Governor, Senate, and House, and yet even political fraternalism could not amalgamate their varied objectives; individual programs were so obstructive to legislative accomplishment that an extra session seems inevitable.

The legislators, being on the stage, get the "boos and cat-calls" and practically no applause in their trying ordeal. No session has ever had more difficult problems to solve or a more critical public to play to.

Let us remember that "we, the people" elected them;

—That we DEMAND millions for schools, with our two thousand and thirty-three school districts;

—That we just must have millions for good roads;

—That we are doggedly insistent on the perpetuation of separate and complete governments for sixty-three counties and two hundred and ten cities and towns;

—That when all of this money is spent we ask the legislature to pull some Houdini stuff to balance the budget by economies from the pittance that remains for state government, state hospitals, and health programs.

—That we need a Turkish towel to sop up our tears over our dire condition of poverty in Colorado, yet we spend \$150,000 for beer the first day it is available.

Mr. Hoover once used the term "rugged individualism." He had no idea of applying it to doctors, but it is a perfect fit; they are the finest type of this ideal. They personify all the noble qualities of character he implied when he used the pat phrase. And just as completely they demonstrate the pathetic and utter inadequacy of individuals to meet the economic and political problems of the day so long as they are nothing more than individuals persisting in an individualistic philosophy.

It is a tragedy that many of these men, individually so commendable and noteworthy, should collectively be so futile and without unity of program.

During this session of the legislature, the Colorado State Medical Society took official action to support the program of our state hospitals in their service to the people. Yet individual doctors introduced bills and lobbied against that program with an argument to the legislators that they wanted to save taxes for the people and with an argument to the medical fraternity that the state is in competition with our profession. Recognition and commendation should, however, be given this group of doctors in that they ceased their activities after our House of Delegates had spoken.

The House of Delegates in special session officially recorded its disapproval of the cult-sponsored "open shop" workmen's compensation bill, but forthwith another

group of our Denver profession used lobby alignment with cult associations and "petitioned" the Senate to oppose our organization's action, even in the face of a vote of 91 to 7 of the Medical Society of the City and County of Denver.

And then we marvel that legislators and the public do not credit us with higher rating and that more is not accomplished in consummating the passage of sound medical laws!

This malady of "individualitis" seems to be endemic in Denver, "out-State" being practically free from it. It is an acute, self-limited, contagious, and non-fatal disease characterized by hyperpyrexia with active delirium, delusions of persecution and "decompensating compensation," with hallucinations of impending danger. The etiology of this disease, in the last analysis, is the lean pocketbook of periods of depression. The present treatment is not satisfactory, but it has been suggested that a large Neon sign be added, reading, DENVER IS NOT THE STATE OF COLORADO. It is universally observed that spectacular euphoria attends recovery.

A bass drum is capable of more noise than any instrument in the orchestra, but it is not a howling success as a solo instrument.

It is neither wise nor profitable that we should all see legislation and regulation from the same angle. Was it not Aristotle who said, "Incredulity is the source of all progress"? There are two sides to all questions. Even a clock, with all of the works taken out of it, leaving the hands and face, will record the correct time twice every twenty-four hours. But it is both wise and possible that we should cover our differences within our own organization and come out of conference with and for an agreed program.

Let us hold up the hands of our State President, our permanent Secretary, and the Editor of our Official Journal. No one can question their integrity and intent to give the best service possible to the people of our State in all their health endeavors, and it is axiomatic that, in considering any of the many problems incident to these turbulent

days, it may be observed that if it is not for the best interests of the people in general it is not for the ultimate good of our profession.

Cheer up! The sun still shines in Colorado.

W. W. K.



Economics Conference

EVEN on Sunday, physicians are interested in medical economics. The whole of a sabbatic day, April 30, was given over to a conference by members of the Denver County Medical Society. Attendance was splendid; it is good to see doctors aware of the necessity of being informed upon present economic trends—interested actively, not passively. A few highlights only may shine in these few lines of comment. We hope other counties may follow this example and inform us of their findings.

Dr. A. D. H. Kaplan of Denver University opened the program with a consideration of general economic trends. August, 1932, was an all-time low month; commerce has not returned to such depths. The descent of basic industries has ceased, though individual incomes, needless to say, may still be on the toboggan. The immediate outlook now appears brighter, but the future possibly darker—there are too many chances of going wrong. Consistent improvement depends entirely upon constructive measures which will create new wealth and give employment; this is a long-term process. In reference to our profession, Dr. Kaplan commented upon the family physician "going out of style." Incidental to the tendency toward over-specialization, patients have too often failed to consult the family doctor to determine which specialist they need. The money is often gone before suitable medical service is instituted. The future "family physician" may be corporate—all specialties under one roof. Any organization which doesn't organize itself well privately is liable to government control.

A good point arose in the discussion of the paper on health insurance: Our lower

income classes are now dependent upon us for medical service; for this we receive no remuneration. The institutions in which we work are a heavy drain upon funds from taxation. Therefore, a premium of 5 or 10 cents a week collected by statutory provision of the state, from workers in the lower income classes, would lower taxation and would allow a fair return to physicians who now receive nothing for that work. The State provides a place for the lawyer to practice and pays him to defend the indigent at the bar. So could it main its benevolent institutions, pay physicians who serve, and maintain high standards.

One of the speakers discussed the Iowa plan for the care of indigent sick: The County Medical Society contracts with the Board of Commissioners for a fixed annual sum. Such funds are used for medical library books and equipment, medical society dues, and contingencies. Any remainder is prorated among participating members; the proceeds amount to about \$100 per year apiece. The plan has several advantages: The medical society has an income previously denied; the County Commissioners have a more simplified expenditure for care of the indigent; more doctors care for the indigent; a better coordination of physicians, applicable to this and other problems, is brought about. There are also disadvantages: The plan is subject to politics; it is an entering wedge for social insurance which could expand and become a menace.

Speakers also alluded to a few of the 470 varieties of schemes now operating in this country. Many are unsound; most are simply commercial exploits for lay profit. The legitimate insurance world is not interested in health insurance unless it can control the medical service, and the promoters of group hospitalization assuredly plan to include medical service at a later date. Of all such schemes, the promotor's fee ranges between 25 and 75 per cent of total receipts. This portion represents just so many medical dollars taken away from the profession.

The Committee on the Costs of Medical Care came in for its share of reckoning. Many consider the report too involved and biased—the latter because only one-third of

the Committee was composed of physicians and the viewpoint was almost entirely academic. Among the pertinent facts from the findings of the Committee are the following: Forty-five per cent of physicians are specialists, whereas eighteen per cent would suffice. Even in the high salaried element of the population, only 84 per cent of the individuals receive all the necessary medical care. Granting that future medicine lies largely in the preventive field, what a small start now prevails! Among rural children, only 7 per cent have periodic health examinations and 7 per cent are vaccinated against smallpox before the age of six. The Public Health Service is handicapped through lack of appropriations. In 1929, the nation's health bill was half that spent on pleasure cars and pleasure travel; millions of dollars were wasted on cults and patent medicines. Medical needs are uneven and utterly unpredictable. The wealthy who are well, pay nothing; when they are sick, a very few physicians care for them. One-half our income is from people whose income is under \$2000; 40 per cent is derived from the element with income ranging between \$2000 and \$5000. Our overhead expense averages 40 per cent of gross income. Seventy thousand general practitioners receive less than 30,000 specialists. It is obvious that any good economist could recommend many improvements in our economic management.

The Society was fortunate in having Dr. R. G. Leland, Director of the Bureau of Medical Economics, A. M. A., as guest at this meeting. Dr. Leland urged no more wasting of time upon the personnel of the Committee or upon the motives of foreign plans; interpretation of their findings in view of this country's requirements will enable us to avoid mistakes. Abroad, there are only three countries where both the people and the profession are satisfied with health insurance or socialized medicine—Denmark, Holland, and Great Britain. In twelve, neither is satisfied; in four or five, one or the other is satisfied. Dr. Leland reiterated the opinion of one of the other speakers, that medical care has always been worth all that has gone to physicians, but

the extras have augmented the costs of "catastrophic" illness to the prohibitive point for a majority of the people. Nursing and hospital bills, not physicians' bills, run up the medical costs. Those services could be socialized. Medical service could not—and still be medicine as we honor it.

One speaker accounted for the general opposition of our profession toward any radical change from the medical system established by our forefathers: Each enjoys a confidence in his own ability to make a living. "When Hippocrates took care of a beggar, he expected a rag; when he served a king, a principality was earned." Our scientific quality has no parallel; our altruistic purposes are beyond reproach. Finally, most of us would prefer the traditional principles of medical practice, but if a change must be wrought, the majority will place the best interests of the people before our own economic security.



Insulin by Mouth?

THE chemical study of insulin by Dr. Hans Jenson of Johns Hopkins indicates that the activity of this hormone may be due to a peptide. If this is true, its oral administration may be made effective. Such would depend upon finding a peptide or similar protein compound, of low molecular weight, having the insulin effect. Our present insulin possesses a complex heavy molecule. The active principle, however, may be only a part of this molecule. Dr. Jenson suggests that the active part of insulin is a peptide composed of cystine and glutamic acid.

With hopeful anticipation we will be alert for developments which may free our diabetics from the tedious hypodermic medication.



Yeast Testimonials

ADVERTISING that has "gone American" becomes increasingly ludicrous as facts are compared with blatant misrepresentations.

Medical science has borne the brunt of more than its share of distortion.

The reputation of Vienna as a world medical center has been flayed by testimonials from alleged members of its medical faculty. An extensive inquiry was made into this matter in June, 1932. Vienna Medical Faculty members at fault were reprimanded by the dean, and all members were forbidden to give any testimonials for advertising purposes in the future.

No member of the Board of Professors (department heads) was involved. The esteemed Vienna Medical School has asked the medical associations of America to spread this information among their members.



Label Boric Acid Solutions "Poison"

THE notorious instances of infant deaths from misuse of boric acid solutions are inexcusable. Its use has become so commonplace that too often ordinary precautions are unobserved.

Label it prominently, respect it as "poison," especially in institutional work.



New Light Upon Atomic Structure

THE American Association for the Advancement of Science has awarded a \$1000 annual prize to M. A. Tuve, L. R. Hafstad, and O. Dahl of the Carnegie Institute at Washington. These workers have been developing a 2,000,000 volt x-ray tube and have successfully photographed the tracks of the nucleus of the hydrogen atom, called the proton.

The proton is the positive particle of electricity residing within the nucleus of the atom, in contradistinction to the electron which is the negative particle of electricity inhabiting the outer part. The latter has for years been less refractory to study and photography. Thus we have in this work a new glimpse into the mystery of atomic structure.

SPASTIC COLITIS*

LAWRENCE L. HICK, M.D.
DELTA

The subject of so-called spastic colitis is in this discussion considered as a distinct clinical entity and prepared for its value to the general practitioner. The subject is known by other names, as neurogenic colitis, mucous colitis, simple colitis, spastic or unstable colon, spastic constipation, and mucomembranous colitis. The term spastic colitis covers a definite clinical syndrome and has the advantage of brevity and common usage. The literature on the subject was especially abundant during the years 1928 to 1931, and the greatest advance in our knowledge of the mechanism of the colon has occurred during the past decade.

Etiology

It is generally agreed that the fundamental cause of spastic colitis is a deranged nervous function. The coordinating and correlating mechanism of the vegetative nervous system has been lost or temporarily interfered with. All spastic colitis patients exhibit some form of a neurosis. They are very introspective, and as Bailey ably expresses the situation, "All life and happiness is bound up in the activity of the bowels and the condition of their stools." They are continually abdominally conscious. Nervous or emotional strains aggravate, while rest and relaxation improve the condition.

Among the most important secondary causes are constipation with abuse of the colon by laxatives, enemas, and improper diet; organic lesions of the intestinal tract, as appendicitis, cholecystitis, peptic ulcer, and adhesions. We exclude trauma, new growths, and parasites. Lesions outside the intestinal tract, such as all focal infections, may well be a cause.

The majority of cases occur during the third and fourth decades of life. The strain and stress of life is greater during this period, and among those so inclined the effect on the nervous system is often disastrous.

My cases occurred between the ages of 28 to 61 years. Most authors state that the female sex is more commonly affected, but I have not found this to be true in my series of cases.

Allergy and endocrin disturbances must surely be considered as etiological factors, particularly the latter. A tendency toward hypothyroidism is a striking feature in most cases.

Symptoms

The symptoms of this condition are almost innumerable, and one's attention is diverted from one system to another until finally it is settled as a gastro-intestinal case. The history is long, complicated, and covers a period of months or years.

The abdominal complaints vary from a vague discomfort to griping pains. A dull aching throughout the entire abdomen, but especially along the course of the transverse or descending colon, is quite typical. The pain or discomfort is not associated with meals. It may reach a climax preceding defecation and be relieved afterwards. Enemas often aggravate the pain. Constipation of long duration is very common but is not invariably present as some authors believe. Diarrhea may occur intermittently, particularly if the patient undergoes some severe emotional strain or abuses the colon by enemas or purgatives. The stool is characteristically mushy, but in the severely constipated cases may consist of hard lumps. Gas is commonly over-abundant and produces a feeling of fullness and a rumbling noise in the abdomen. The appetite is decreased. All the digestive tract symptoms are aggravated by worry or strain.

The nervous symptoms are many and variable, but stand out with about equal prominence with those of the gastro-intestinal tract.

Worry and introspection are very common. One is struck by the number of patients who state that they are not nervous. Nights of sleeplessness or of unrefreshing sleep are complained of in many instances.

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932.

There is evidence of depression and emotional instability. These patients tire easily, and it is a marked effort for them to carry on in their respective vocations.

General symptoms include loss of weight, occasional palpitation, faintness, dull headache and a bad taste on awaking, and threats of self-destruction.

Physical Findings

These individuals show a general nutrition below par and usually cold extremities with perspiration. The tongue is generally coated, and the breath is bad. The abdomen is usually tender throughout, but particularly along the course of the transverse and descending colon. The spastic colon can often be palpated. Many cases exhibit surgical scars, and, according to Drueck, "have surgically decorated abdomens which constitute a pitiful picture." Digital rectal examination reveals a rectum devoid of fecal material and a condition of proctospasm.

The stool is mushy or composed of hard lumps. Mucus is present to more or less degree and always mixed with the stool. The odor is sour and penetrating. The presence of blood is not a distinguishing finding. Culture of the stool usually shows a decrease in the gram-negative acid bacteria, and we may find a short-chain streptococcus.

The x-ray is the most useful single method of diagnosis. The barium meal is considered more accurate than the enema in studying these cases, although the use of both in a single case is even more complete. Two types of pictures may result from the examination: first, those showing irritability of the bowel, in which the barium proceeds faster than normal; and second, those showing stasis, in which the barium column is slow in its progress through the bowel. Both, however, reveal the same changes in the form of the colon. The typical change in form is the irregular spacing, with more or less loss of the normal sacculations, producing a ragged, twisted, or distorted appearance of the barium column. The barium is often streaked through the colon, or again we find a typical beaded appearance. There is an increased gas content of the colon, and in most cases this will be observed mixed

with the barium mass. The presence of streaks or flakes are due to the barium getting caught in strings of mucus.

It has been claimed that the routine gastro-intestinal x-ray study of the nervous patient will invariably reveal a spastic colon, but most authors agree that so-called spastic colitis reveals the typical colonic deformities.

Differential Diagnosis

Too often cases of this description leave our offices with the diagnosis, in our own minds, of a neurosis or that possibly a laparotomy could be performed. In either case a grave injustice is harbored, and with this in mind I urge more care in diagnosis.

As stated in the etiology of this condition, we may find definite lesions of the intestinal tract, as a chronic appendicitis, cholecystitis, peptic ulcer, or adhesions. These diseases may be the cause of the patients' symptoms, a cause of the spastic colitis, or a definite entity entirely independent of the disturbed colon.

One of my male patients has been examined by physicians and quacks throughout the country and given various diagnoses ranging from chronic cholecystitis to an enlarged prostate. The diagnosis of a slight left inguinal hernia was made in two instances, trusses recommended and used without relief. Complete x-ray studies were made by only one consultant with the result that a diagnosis of spastic colitis was easily made. All other conditions can readily be ruled out with this patient, and he gets along nicely on a spastic colitis regime.

Mucous or mucomembranous colitis is sometimes confused with true spastic colitis in which much mucus is present. The location of the mucus is quite distinctive. In mucous colitis a passage may consist entirely of mucus, or there is a large quantity enveloping a stool.

Prognosis

Not unlike many other diseases, spastic colitis calls for a guarded prognosis. Too many factors enter into the cause and the treatment. Recurrences are common, principally because the patient drifts back into old habits after enjoying a period of good health and feels that the treatment is too

strenuous to continue. The prognosis for freedom from attacks is quite good when the patient is entirely cooperative and financially able to follow the treatment.

Treatment

Spastic colitis presents a real problem in therapy and one that is at times discouraging to patient and physician alike. A thorough understanding of the condition, plus patience and attention to all the details of treatment, will be most apt to get results. Perfect cooperation by the patient must be insisted upon.

The underlying causes in each case must be determined and their eradication attempted. All foci of infection should be cleared up; but when this involves major surgery and the benefits are doubtful, the surgery should be postponed, and all other methods of treatment tried first.

Rest and relaxation, both physical and mental, are necessary during the acute stage. The question often arises as to the advisability of a change of climate or occupation. Spastic colitis patients come from all classes, all vocations, and all climates. A vacation will in most cases prove very beneficial at the beginning of treatment, and on resuming his or her regular duties the patient will have renewed energy and contentment and will be satisfied, for awhile, at least.

Psychotherapy must not be neglected. It can be practiced more or less as the case demands and as each physician is best adapted in its use. It may mean the difference in results.

As the x-ray is the best single method of diagnosis, so the diet is the best single method of treatment. There is still a dispute as to whether a bland non-bulky, or a bulky irritating diet is best. A trial of both should be entirely convincing of the value of the former.

Avoid all raw vegetables and raw fruits containing coarse fibre, cabbage, fruit with sharp kernels or seeds, all bread except white, all coarse cereals, strong spices, coffee, tea, cocoa, carbonated cold drinks, and alcoholic beverages.

At first use only milk and all dairy products; soft-boiled eggs; white bread; well-

cooked potato; meats; soups; well-cooked cereals; stewed fruits; fruit juices; jellies; vegetable oils; and young, tender vegetables, well-cooked and passed through a colander. The use of plenty of fats and oils, fruits, and fruit juices will usually take care of constipation. As the patient's condition improves, other foods can be added until a normal diet is reached. A diet list with sample meals and all other definite instructions should be given in writing to each patient.

Light mineral oil is prescribed in two- or three-tablespoonful doses daily. This is not absorbed, but lubricates the entire intestinal mucosa and mixes well with the fecal material, rendering it soft and smooth. Acid bacillus milk is very beneficial for changing the intestinal flora and overcoming constipation. The bacillus *Acidophilus* is also prepared in chocolate cubes similar to fresh yeast cakes and may be eaten in the same way. Combining the advantages of oil and acid, one may prescribe a one or two per cent lactic acid in suspension in mineral oil.

Drugs will be found necessary in most cases, but should be discontinued as soon as possible. As an antispasmodic, belladonna or some derivative is employed. Benzyl benzoate and extract of hyocyamus have also been used. The type of sedative to be used has aroused considerable discussion. The exponents of the barbituric group have been pitted against the defenders of the bromides. Good therapy would be to use each intermittently. Thyroid extract is used to effect when indicated.

Laxatives are to be condemned in general, and usually the patient has found that laxatives aggravate his condition and has discontinued their use voluntarily. Enemas are to be used only as directed by the physician. Water combination enemas have very little place, and glycerin enemas, absolutely no place in our treatment. Vegetable oil retention enemas may be necessary at the beginning of the treatment if the evacuations are unsatisfactory. Olive oil or some vegetable oil in amounts beginning with four and increasing to sixteen ounces is carefully instilled into the colon each night.

They must be retained for some time, preferably over night. Rectal pressure and gas are frequently complained of so severely that the oil enema must be used at some other time or entirely discontinued. These enemas are gradually dispensed with as the evacuations tend to become more normal. In the absence of a spontaneous bowel action the morning after the oil enema is used, a small saline injection is given.

Mechanical abdominal massage is not to be recommended. Warm fomentations, warm woolen binders, or the electric pad applied to the abdomen are quite comforting. Cold rubs or cool baths produce a beneficial tonic effect to the nervous system. Diathermy to the pelvic colon has been successfully used, but will seldom be necessary.

In cases of known or suspected food allergy the offending proteins must be found by skin tests or diet elimination and removed.

All of these therapeutic measures will rarely be found necessary in any one case, but belong to our armamentarium, and even that may be found lacking in treating some cases of spastic colitis.

REFERENCES

- Bailey, Sam P.: Spastic Colitis, *Journal of the Tennessee State Medical Society*, vol. 23, p. 1, (January) 1930.
- Barker, Lewellys F.: On the Management of the Spastic Colon and Mucous Colopathy, Especially in Hypervagotonic Persons, *The American Journal of the Medical Sciences*, vol. 178, p. 606, (November) 1929.
- Cawadias, A. P.: Mucomembranous Colitis and Nervous Spasmodic Colopathy, *Medical Journal and Record*, vol. 126, p. 425, (October) 1927.
- Drueck, Charles J.: The Spastic Colon, *International Clinics*, vol. 3, p. 85, (September) 1929.
- Gauss, Harry: The Spastic Colon, *Annals of Internal Medicine*, vol. 3, p. 1128, (May) 1930.
- Gilbert, Quinter O.: The Spastic Colon, *California and Western Medicine*, vol. 30, p. 330, (May) 1929.
- Gilliland, C. E., and Sigoloff, E.: Irritable Colon (Spastic Colon), *The Journal of the Missouri State Medical Association*, vol. 28, p. 535, (November) 1931.
- Morris, Samuel J.: Spastic Colitis, *The West Virginia Medical Journal*, vol. 27, p. 342, (August) 1931.
- Rinkle, Herbert J.: Chronic Colitis, Importance of Food Allergy as an Etiology Factor, *Proceedings of the Staff Meetings of the Balyeat Clinic*, vol. 1, p. 10, (July) 1932.
- Ryle, John A.: Chronic Spasmodic Affections of the Colon and the Diseases Which They Simulate, *The Lancet*, vol. 215, p. 1115, (December) 1928.
- Steiner, L. J.: Chronic Irritable Colon, *Journal of the Detroit College of Medicine and Surgery*, vol. 1, p. 54, (July) 1930.

THE SCHILLING BLOOD COUNT*

ROYAL H. FINNEY, M.D. and JOSEPHINE N. DUNLOP, M.D.
PUEBLO

With the exception of urinalysis, the white blood count is our most common laboratory procedure. Examinations of the blood make up about 40 per cent of laboratory examinations, and studies of the white blood cells make up the greatest percentage.

No question can be raised as to the value of a total and differential count in certain pathological states and in determining the degree of infection or resistance of the patient. However, leukocyte count is not always infallible, and while there are a few diseases in which the estimation of the total number and percentage of white cells is of no value, any improvement of methods is welcomed by the clinician.

Arneth in 1904 was the first to try to make a different classification, classifying the white cell according to nuclear morphology, and first to call attention to what is now spoken of as "shift to the left." His method proved to be too complicated. Cook modified Arneth's method, and his technic also was not feasible as an ordinary laboratory procedure. Schilling, in 1911, then simplified Arneth's method and developed a technic which does not especially increase time and labor, and which we believe has added something to the value of a white blood count. Gerard and Boerner have added much to such studies, bringing out the true meaning of "shift to the left." Some think this terminology is of no value and only superfluous, yet it explains a good deal. The polymorphonuclear neutrophils are considered to be the mature type in the

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Schilling classification and are called segmenters. The forms which have not quite reached maturity, have no segmentations in the nucleus, which nuclei assume the shape of a bent rod, are known as staff forms. Next in immaturity are those slightly larger than the staff; they have a fainter staining indented, rounded nucleus, and are called juveniles. The next subdivision toward the left is the typical myelocyte. These latter cells are normally absent from the peripheral blood. Juveniles are rarely present up to as high as one-half of one per cent; staff forms occur normally up to five per cent; the remainder of the polymorphonuclear neutrophils make up the so-called segmenters. The remaining white cells taken into account are basophiles, eosinophiles, lymphocytes, and large monocytes. The total white count is not so important as the increased normal or decreased various forms. A usual average normal white count of 6,000 to 10,000 runs about as follows: Basophiles, .5 per cent; eosinophiles, 2 to 4 per cent; myelocytes, 0; juveniles, 5 per cent; staff, 4 per cent; segmenters, 67 per cent; lymphocytes, 23 per cent; large monocytes, 6 per cent.

In the presence of infection, an increase in the immature forms or "shift to the left" is expected, and with a subsidence of infection a shift back to the more mature. Because of some foreign agent either toxic or bacterial, the bone marrow is called upon. Since it contains only a small number of mature leukocytes, large numbers of immature forms are thrown into the blood stream in order to meet the demand. Therefore the greater the demand, and the less adequate the bone marrow, the more immature the cells there will be. We then observe the "shifting to the left" from staff forms down to myelocytes where there is a critical infection and the prognosis becomes worse, and a reversion back through these various steps to the mature forms as recovery takes place.

Schilling also takes into consideration the lymphocytic and reticulo-endothelial systems and large mononuclears. With a drop in number of immature cells, the monocytic system is stimulated, along with a return of

eosinophiles which have been depressed along with monocytes. With these latter changes, and a "shift to the right," we have an indication of beginning recovery. Following this first increase of monocytes, they fall back to normal, with a gradual increase of lymphocytes, indicating a period of convalescence. Thus the immature count has returned to normal, eosinophiles and monocytes dropped to normal, and a lymphocytosis is present. Again in the presence of a chronic infection or one that has not completely subsided, the granulocytes may remain slightly high, the monocytes and eosinophiles slightly high, and also a lymphocytosis, indicating there is something that still causes chronic irritation. To be of value, many counts may have to be made—daily, twice a day, or even more often. This is because changes in the blood picture often occur very suddenly and sometimes indicate pathological changes several hours before clinical proof.

What has been written thus far is the consensus of opinion of many writers, and some have laid a great deal of stress on marked increase of immature cells in beginning infection.

For the past two years, we have been using the Schilling method for our blood counts, during which time 4,174 counts have been made by two laboratory workers, thus diminishing the personal equation factor of error. The cover glass method for making the smears is employed, and Wright's blood stain is used exclusively. All the members of the immature groups of Schilling are combined under the immature staff forms for the purpose of simplification for both technician and clinician. We wish to stress the point that we do not find the high percentage of immature forms in cases of severe infection, excepting toward the end in cases which prove fatal. A brief presentation of a few cases follows, to illustrate this point.

CASE 1

H. C., male, aged 30 years. This well-developed young man entered the hospital looking very ill and complaining of acute abdominal pain, but was able to walk to hospital office from entrance. He was put to bed on a surgical ward as an acute abdominal condition was suspected. Later, chest symptoms developed, but there was no cough, and no sputum was obtained for typing.

First blood count taken early in the morning of the following day was as follows: White cells, 6,200; hemoglobin 84 per cent; segmenters, 81; staffs, 13; lymphocytes, 6. Afternoon count of same day: White cells, 3,600; segmenters, 80; staffs, 13; lymphocytes, 7. A third blood count was taken the next day as follows: White cells, 5,600; segmenters, 41; staffs, 56; lymphocytes, 3.

The higher percentage of immature cells did not appear until a few hours before the patient died. Diagnosis, streptococcic pneumonia.

CASE 2.

J. G., female, aged 16 months. The child was in a semicomatose condition when brought to the hospital. Only a meager history was obtainable. X-ray of the chest was negative. Examination of spinal fluid was also negative.

On the morning following the entrance of the child, the first blood count was taken, which was as follows: White cells, 7,600; segmenters, 56; staffs, 39; lymphocytes, 5. A blood count was repeated the following day, a few hours before death occurred, which was as follows: White cells, 2,800; segmenters, 8; staffs, 70; lymphocytes, 22. Here again we have a high per cent of immature cells preceding death. Diagnosis, streptococcic septicemia.

CASE 3.

F. K., male, aged 18 years. This patient entered the hospital at noon complaining of severe pain in lower right quadrant. He walked in and was put to bed at once. The blood count was taken with the following results: White cells, 19,400; segmenters, 87; staffs, 11; lymphocytes, 2. The patient was operated upon that afternoon; a much distended and inflamed appendix was removed. The per cent of immature cells in that case was not high. Two days following the operation the blood count was: White cells, 11,400; segmenters, 74; staffs, 10; eosinophiles, 2; lymphocytes, 14. On the fourth day following operation the blood count was as follows: White cells, 8,600; segmenters, 78; staffs, 13; eosinophiles, 2; lymphocytes, 7. In this case the per cent of immature cells remains about the same, and the patient is showing a normal recovery following this type of operation.

CASE 4.

C. P., male, aged 20 years. This patient gave a history of having had three attacks of appendicitis, but owing to the previous history, it was thought advisable to remove the appendix. Blood count was as follows: White cells, 7,000; segmenters, 77; staffs, 8; lymphocytes, 14; eosinophiles, 1. At operation the appendix was found to be thick, very hard, and adherent around the base, evidently due to previous trouble. The per cent of immature cells was about as one would expect.

CASE 5.

A girl, aged 12, seen at noon. Abdominal pain throughout the morning was more marked in the right iliac region. No vomiting. Physical examination, negative except moderate tenderness, right iliac, and some muscle resistance. She was sent to the hospital with sincere belief that she was suffering from acute appendicitis.

White count taken at 2 p. m. was 18,800; eosinophiles, 1; staffs, 8; segmenters, 73; lymphocytes, 18. Temperature, 99 degrees. Even though the total polymorphonuclears were only 81 per cent, the staffs were a little elevated, and the surgeon advised operation. This the family refused.

Next morning at 8 a. m., white count was 11,200;

eosinophiles, 1; staffs, 8; segmenters, 70, and lymphocytes, 21. We see here a drop in total polymorphonuclears to 78, and increase in lymphocytes, and with it symptomatic improvement. Operation still advised, but refused. I was not quite so concerned. On the third morning there was no abdominal discomfort, but still little tenderness; white count, 7,800; eosinophiles, 1; staffs, 4; segmenters, 71; lymphocytes, 23. Temperature, normal. Good results from salt and soda colonic flushing. Child was allowed to go home and is now in school apparently well. There surely must have been a catarrhal appendix, but no pus, and these counts are quite characteristic.

In conclusion, we wish to stress that we do not find the extreme "shift to the left" in borderline cases as reported by many, but that we do find that condition in extremely infectious cases, with very bad prognosis. We depend a great deal on the total number of immature and mature polymorphonuclears and lay some significance on the staffs, juveniles, and myelocytes as they increase above normal, indicating a more severe infection, and as they decrease and segmenters increase, along with increase of lymphocytes and eosinophiles, we feel the infection is subsiding.

We also believe that the count is worthless in the hands of internes, or any service where there is a constant shifting of laboratory workers. The same technicians must be doing the counts month in and month out in order to get a true and reliable picture.

Teeth and Life Expectancy

Dr. Charles Mayo of the Mayo Clinic at Rochester, Minnesota, has made the statement that 46 per cent of deaths occurring before the age of 60 are traceable to teeth and only 41 per cent to tonsils. If you have neglected diseased teeth, the chances are almost 50 to 50 that you will die before you are 60 from a disease connected in some way with your diseased teeth. This is a startling statement and one which should be considered. All children's teeth should be sacredly guarded and periodically inspected. No child should be permitted to go about with neglected and diseased teeth. Several years ago a survey was made in the United States which showed that 22,000,000 children had dental defects. It has also been proved that children are retarded in their school work by diseased teeth.

HEALTH EXAMINATIONS IN SCHOOLS*

EDWARD JACKSON, M.D.
DENVER

The Silliman Lectures at Yale University on "The Evolution of Modern Medicine" were delivered by Sir William Osler in 1913. The publication of them began soon after their delivery and was interrupted by the World War, not to be completed until after their author's death. These lectures start with "priestly wisdom and magic" in Egypt, trace the development of medicine through Greek and medieval medicine, the study of anatomy and physiology and development of modern medicine to the rise of preventive medicine. What he called his "aero-flight over the progress of medicine through the ages," was arranged to bring out clearly the emergence from dark superstition and a tangled web of priestcraft and philosophy to the cultivation of clinical observation, the accumulation of natural history of disease, and the differentiation of diseases. He also delineates the passage from charms and incantations to meeting of emergencies, the rest of injured parts, the tying of bleeding arteries, the removal of tissues so diseased and poisoned as to threaten life, and the understanding of pathologic processes. Finally he describes the search for causes and the development of methods of prevention. Pasteur, considered by Osler "the most perfect man who has ever entered the Kingdom of Science," discovered causes and methods of prevention. The great workers of the last generation, Koch, Kitasato, Trudeau, Ross and Manson, Lister and Lawson Tait, Walter Reed, Gorgas, Noguchi, and the host of their colleagues in other branches, have carried medical science into the state of preventive medicine. In 1832, while working on "swine fever" (hog cholera), Pasteur wrote to his wife: "You know that nowadays a medical knowledge of disease is nothing, it must be prevention beforehand. We are attempting this, and I think I can foresee success."

Are we prepared to join in this attempt

and foresight? A great proposal is now squarely before the medical profession, to force preventive medicine upon the attention of the people, by what are called health examinations. Naturally the dramatic feature of epidemics and fatal diseases, like smallpox, bubonic plague, syphilis, tuberculosis, malaria and yellow fever, typhus and typhoid have first claimed attention. Then followed the widespread and dangerous diseases, like eruptive fevers of childhood, diphtheria, scarlet fever, meningitis, infantile paralysis. Cretinism, scurvy, rickets, trachoma, and leprosy were faced by scientific study and put, more or less, under human control. There remains a great mass of departures from health which cannot be met by quarantines, antiseptics, antitoxins, serums, or specific drugs. Health depends on the daily life of the individual. The things that threaten, undermine and finally destroy it, must be discovered, understood, faced and eliminated. The health examination is a means of carrying the war against disease into the enemy's country. Physiology and hygiene must be forced on the attention and consciousness of the great mass of people, to be applied in every part of their daily lives. This will constitute the greatest popular advance that medical science and medical art have made since the Code of Hammurabi recognized, in the laws of Babylonia, the importance of the medical profession to the body politic. The health examination in the public schools is the best conceivable weapon with which to fight the great battle of modern medicine, taking up its duty of securing the general understanding and appreciation of race health and spreading the determination to secure it. We cannot hope for a better opportunity, a more effective method to reveal and destroy the ignorance, the superstition, the mawkish sentiment that continually oppose modern medicine under the banners of antivaccination, antivivisection, medical freedom, or Christian Science.

The Civil War was ended not by a crushing battle that would have left thousands of

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homes desolate in both North and South, but by sending Sherman on his march from Atlanta to the sea. The forces that delay and impede the progress of the public health will be overcome by teaching the school children the value of health and the ways to secure it—teaching, not by lectures or homilies, but by concrete examples, in themselves and their schoolmates. We will bring about the correction of physical defects and the checking of epidemics by these examinations and the rules of health carried out by school authorities. Health examinations and their findings put into effect in the schools will be understood by the whole community in the next generation.

Health examinations are needed for the joint education of the community and the medical profession. We must popularize health examinations and make them effective; such is a vital part of the training of any doctor who is to be both teacher and physician. That standpoint must be reached by every one who deals with the health of children. It must be reached to make the child understand what he should do and what is expected to be accomplished or to create an understanding among parents so they can give the needed cooperation. Even teachers and school authorities must not be forgotten in the general and persistent need for health education.

Here in Colorado we are particularly fortunate in the obstacles that constitute our opportunities. We have a territory larger than that of New England, New York, New Jersey, Pennsylvania, and Delaware, and a population correspondingly scattered and ways of communication undeveloped. There are 300,000 school children in the state who need health examinations; of these only one-third live in the cities that have organized health services. There are 600 of these children who need the help of sight-saving classes. There is one such class in the state, in Denver, where five such classes are needed. The State School for the Deaf and Blind depends on its summer canvass of the county school authorities to get in touch with the children who can only get an education through opportunities it has to offer. There is just one possible group that can

bring about health examinations in the schools. That group is the Colorado State Medical Society.

Of late there has been some looking back to the old days with admiration of the general practitioner. In Colorado there are many places and communities where the general practitioner still exists and must continue to exist. He must make the health examinations for schools and the majority of pre-school children if they are to have the same care as the children in towns and cities. There are counties in this state with only two or three doctors to do the whole work of the county; some of these counties are as large as Rhode Island or Delaware. Every child in the state has an equal right to the opportunity for health. In this state, health examinations cannot be simply one more cog in the vast educational machine. It is a problem of human beings dealing with human beings; it makes us face primitive conditions and fundamental facts.

However important health examinations may be, can the general practitioner carry this addition to his burden of service? He can if he is worthy of the name general practitioner of medicine. He is the best qualified, perhaps the only qualified, member of the medical profession to undertake it. Insofar as we have all studied general medicine we have partly qualified. Insofar as we have not kept up and increased our knowledge of general medicine, an implied obligation of every member of the profession, we are not qualified to make health examinations. Group practice will have to develop its organizations enormously before it can replace the general practitioner in such work as this.

Let us not sit down in despair about it. We all have some qualification for this work of health examination. Even the country doctor can do something to increase his equipment for it. He will find that everything he learns for health examinations makes him a better practitioner. The mature physician or surgeon will be made a better doctor by reviewing what he once knew about children's diseases, orthopedics, and child development.

In this year when nearly every doctor is

talking about "depression," every one is feeling the increased delay in payment of doctors' bills and the enormous growth of service by "veterans' hospitals," this subject of health examinations should be of general interest. Given to school children who in this regard are neglected and helpless, they are a real public service. They raise no bogey of state medicine. They will demonstrate to the public what has been brought out before by great epidemics and surgical emergencies—that the medical profession is loyal and liberal in meeting the great health needs of the public. The younger doctor who takes part in this public service will not be paid cash for his work at the end of the week. But in this he will get fellowship with the clerk or railroad man who is enjoying his five-day week or his forced vacation without pay.

It cannot be expected that health examinations in the schools will greatly attract men who approach every new suggestion with the question, "What will I get out of it?" But for those who base their hope of success on knowing they are able and ready to give the community real service, the opportunity to prove their ability is fairly attractive. They will come in direct contact with the part of the community that is willing and eager to learn and that is unfettered by the traditions and supposed knowledge of the past. In a few years these people will dominate public opinion and distribute the popularity which means success for the professional man. It is a better way to seek practice than by display of surgical instruments or a new automobile.

The health examination is the latest development of modern medicine. The purpose of Hippocrates, "Into whatsoever houses I enter I will go into them for the benefit of the sick," is still the purpose of our profession. In the spirit of service, as it has developed in our generation, we must bring all the resources of modern science to help all the members of our race. This is done most effectively when it is done for children through our institutions for education. The doctor of medicine who wishes to do his part in this work can find his field of labor mapped out in the volume of 250

pages, with bibliographies, on "Health Education, A Program for Public Schools and Teacher Training Institutions," published two years ago by the National Education Association. To one who has a modern medical education the field thus opened affords objectives and opportunities for the best applications of medical knowledge to the attainment of public health. Osler says, "The future belongs to science. More and more she will control the destinies of the nations. Already she has them in her crucible and on her balance. In her new mission to humanity she preaches a new gospel."

The health examination for children should take up every phase of health—congenital defects or tendencies, bad habits already acquired, or unfavorable surroundings in the home. The exposures to contagious diseases will need prompt attention from their earliest symptoms. The relatively great demands of study upon powers of vision, never thus used or developed by his ancestors, demand that vision is good and that the eyes are not giving way under school tasks. The warping of the child from his natural activities to the sedentary life of the scholar should be controlled to prevent mental and moral deformities that may be associated with the scholastic mold. Every bodily sense and physical or intellectual capacity of the young human being should be preserved and developed for the possibilities that lie in the future.

The conditions under which school work is done must be judged by their influence upon health. Home conditions, under which the child spends more than half his time, have such a bearing on school life that they cannot be ignored. The child is in school to prepare for life, and in such preparation his mastery and understanding of health habits demands that formal health education should be a prominent feature in the required curriculum. The health examination should supervise and round out such teaching. Especially is this needed for physical culture, as it is made a compulsory branch. It cannot be carried out by routine or machine methods—it must be fitted to the needs of the individual.

DISCUSSION

***Dr. Thomas D. Wood:** The health examination has already demonstrated its place and value as the keystone of the structure of preventive medicine, considered from the standpoint of the hygiene as distinguished from the sanitation approach. The health examination is logically the function of the physician among all health workers, and Dr. Jackson has well pointed out the advantageous qualifications of the general practitioner and the family physician for the making of health examinations. It has already been stated by some eminent medical authorities that the health examination with the health diagnosis and accompanying advice is no less complex and difficult than the diagnosis and treatment of disease. It is also important to recognize that wide experience and skill in the conventional fields of medicine and surgery do not in themselves train or qualify the physician to make satisfactory health examinations. This requires a definite interest, approach, study and understanding of health examinations as such.

It has been my custom for many years to advocate periodic health examinations for all people and particularly for children—such examinations to be made by physicians who are genuinely interested in and qualified to make health examinations. Permit me to add what I should have had the temerity to say, that on the background of four decades of personal and medical health experience, I am convinced to my great regret, that an unfortunately large number of physicians, both specialists and general practitioners, are not yet genuinely interested in and qualified to make real health examinations.

While health examinations are properly and distinctly the prerogative and responsibility of the physician, it is of great importance for the physician to appreciate the valuable cooperative service in constructive relation to the positive health program, to be inaugurated by the health examinations, which may be given by the informal or more formal health inspections and ob-

*Due to Dr. Wood's inability to be present, this discussion was read for him.

servations that may be made very helpfully by parents, by teachers, nurses and other non-medical health workers. Please note here the exact terminology which is used. Health inspections and observations may be made by non-medical workers. Health examinations belong to physicians. A multitude of earnest lay workers are anxiously waiting today, whether consciously or unconsciously, for the understanding, instruction and sympathetic guidance from the physicians with whom they should be or perhaps are associated, for scientifically sound, constructive health programs in schools and communities.

With reference to another aspect in this problem, health education, Dr. Jackson has suggested the close relationship which should exist between health examinations and the rest of the school health program. Health education is considered today by progressive educators, qualified to speak on this aspect of education, not so much a special subject of instruction, but as the entire range of experiences that may favorably influence the knowledge, attitudes, and habits which are contributory to health. With this view of the problem it will be apparent that health education is a complex program of education in which several, yes many, individuals and influences must cooperate toward a common objective or set of objectives for successful results. Health examinations, as a fundamental phase of health service in the composite school health program, presents in combination with other phases of health service, dynamic situations and significant child experiences for practical application of health teaching. If such practical opportunities are to be used successfully, it is essential that the physician as well as other health service workers should have clear, practical understanding of sound principles and methods of education specifically applied to health education.

Dr. Jackson (Closing): The volume that I referred to is a volume of about 250 pages. Each part of it has an appropriate bibliography and it is put out at cost price by the National Education Association. Any general practitioner with that volume can get an understanding of the field of health examinations in the schools.

RELATION OF SURGEON AND INSURANCE CARRIER UNDER WORKMEN'S COMPENSATION ACT*

W. R. WAGGENER, M.D.
DENVER

An Act entitled Workmen's Compensation Act of Colorado became effective in the State of Colorado on and after the first day of August, 1915. The enforcement of this Act is designated to The Industrial Commission of Colorado, created by the Act of the General Assembly of Colorado.

Under this Act, "Employer" is defined as follows: The term employer shall mean and include:

(a) The state and each county, city, town, irrigation, drainage and school district therein, and all public institutions and administrative boards thereof, without regard to number of persons in

the service of any such public employer; and, provided, that all such public employers shall be at all times subject to the compensation provisions of this Act.

(b) Every person, association of persons, firm and private corporations (including any public service corporation), personal representative, assignee, trustee, or receiver, who has four or more persons engaged in the same business of employment (except as otherwise expressly provided in this Act) in service under any contract of hire, is liable to an employee for injury or death under provisions of this Act.

This Act does not provide nor apply to private domestic servants, farm or ranch labor nor to employers who employ less than four persons in or about the same place of employment. Under this Act, the term "Employee" shall mean and include one engaged at work under contract of hire to one above designated as "Employer." The provisions of this Act do not apply to common

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carriers engaged in interstate commerce, nor to their employees.

The right to the compensation provided for in this Act, in lieu of any other liability whatsoever, to any and all persons whomsoever, for any personal injury accidentally sustained or death resulting therefrom, shall obtain in all cases where the following conditions occur:

(a) Where, at the time of accident, both employer and employee are subject to the provisions of this Act.

(b) Where, at the time of the accident, the employee is performing service arising out of and in the course of his employment.

Section 51 of the Workmen's Compensation Act of Colorado provides as follows:

"Every employer, regardless of his method of insurance, shall furnish such medical, surgical, nursing and hospital treatment, medical, hospital and surgical supplies, crutches and apparatus, as may reasonably be needed at the time of injury and thereafter during the disability, but not exceeding four months from the date of accident, and five hundred dollars in value to cure and relieve from the effects of the injury. Provided, however, that every employer subject to the terms and provisions of this Act, must insure his liability for the medical, surgical and hospital expenses herein provided for, unless permission is given by the Industrial Commission to such employer to operate under special plan. Provided, however, that no plan shall be approved by the commission which relieves the employer from the burden of assuming and paying for any part of the medical, surgical and hospital services and supplies herein above required."

Under the Workmen's Compensation Act, any employer subject to the provisions of the Act, shall secure compensation for his employees in one of the following ways, which shall be deemed to be in compliance with the insurance requirements of this Act:

(a) By insuring and keeping insured the payment of such compensation in the State Compensation Insurance Fund, or,

(b) By insuring and keeping insured the payment of such compensation with any stock or mutual corporation authorized to transact the business of Workmen's Compensation Insurance in this State. And if stock or mutual corporation insurance be selected, the employer or insurer shall forthwith file with the Industrial Commission, in form prescribed by it, a notice of the action.

So now begins the intimate relationship of industrial surgeon and insurance carrier, with the Industrial Commission as referee. The Commission shall have the power to establish a schedule fixing the fees for which all medical, surgical, and hospital treatment rendered to employees under this Section shall be comprised.

There are certain rules governing the applications of the fee schedule as follows:

1. Reports relative to condition of employees under treatment shall be made by attending physician without extra charge.

2. Reports must show in detail the nature and extent of injury and full description of treatment.

3. Bills must be itemized showing date of each visit, dressing, or operation and charge for each service.

4. In cases where flat fees are allowed, it is

not permissible to charge additional fees for visits, dressings, treatment, etc.

5. Fees for daily dressings shall not be paid unless the nature and extent of injury as shown by proof on file clearly indicates the necessity for same.

6. The fee schedule includes all dressings unless case shows that an excessive amount of material had to be used, in which case it will be charged at cost.

7. In all cases, not included in the schedule, fees shall be such as may be fixed by the Commission upon application of any party in interest, after a hearing thereon as provided by law.

It is absolutely essential that the Industrial Surgeon know the above seven rules at least, and abide by them, if the over-worked Industrial Commission be able to properly function. Until recently, the injured workman could choose his own licensed physician and surgeon to care for his injuries, the fee for such service being promptly paid through the Industrial Commission by the insurance carrier. (Please note that irregulars have never been acceptable to insurance carriers.)

On first thought, this was as it should be, but flies got into the ointment. The cost of compensation insurance, originally 17½ per cent of the premium, rose in four years to 38 per cent, and insurance carriers are now accepting contracts practically as a matter of accommodation to firms who are purchasers of other lines of their insurance. Some time ago, attorneys for compensation carriers went before the Industrial Commission and asked that the carrier be allowed the privilege of selecting the surgeon to care for their compensation risks. After a great deal of consideration and discussion on the part of the Industrial Commission, the request was granted. Notice was given to employer and employee that only the surgeons designated by the carrier could care for the injured.

The plot thickens: Surgeons who had done no compensation work before, and who boasted that they did no industrial surgery, became anxious to see their names on these printed lists. Surgeons who had done but little compensation work and were not designated on the list, felt that they were being treated unfairly and general indignation meetings were held. All physicians and surgeons cannot be industrial surgeons, but most of them want to be.

In our Colorado School of Medicine, there is no special chair of industrial surgery, but there should be. There are only a few members of the American Association of Industrial Physicians and Surgeons in Colorado, and only two in Denver. Industrial Surgery is a specialty, and it must be good surgery. Furthermore, it must be done in conformity with existing laws providing for such service. Attorneys for insurance carriers recognized this. Insurance costs had doubled. Medical costs were a problem of importance, so naturally the carriers named such surgeons who had gradually become known by their ability as industrial surgeons to the companies.

Upon being asked for explanation of their action, the Committee of Claim Men had this to say: There is no black list of any regularly licensed surgeon in Colorado, but there are, unfortunately, in our Society, some indifferent surgeons, some incompetent surgeons, some unfair and unscrupulous surgeons, so that a means of protecting insurance companies had to be provided. A request went to the Committee asking for individual reports and constructive criticism of the medical profession concerning the practice of industrial surgery. This request was agreeably granted and much time must have been spent on the reports given, judging from their volume, and these reports should be of great value to the medical profession. From five concise but lengthy reports, one concludes that the path of a claim man of compensation insurance is mostly uphill and the going is rough.

Summarizing these individual reports, agreement is found in all of them on certain common failures of industrial surgeons. First, there is a lack of knowledge of the Compensation Law and the rules of procedure of the administrative body on the part of the surgeon. Lack of this knowledge is general in the medical profession, but this does not mean that a surgeon must be a lawyer and assist in settlement of claims, but it is felt that the surgeon should have at least a working knowledge of the most important provisions of the law. Attention is called to the fact that apparently few of the medical pro-

fession of Colorado, aside from those designated as industrial surgeons, know that the law limits medical, surgical, and hospital attention to an injured employee to four months from date of accident, and in an amount of five hundred dollars in value. Often surgeons do not realize that when this period has elapsed and this amount expended, that neither the insurance carrier nor the employer are liable for further expense. However, many of the larger companies will voluntarily assume and authorize further expense where reasonable chance for recovery of injured employee may be expected. Lack of knowledge of this particular clause seems to be the greatest cause of dissatisfaction and unfair criticism of the law on the part of the medical profession.

Most of the members of the medical profession know nothing of the allowances of the Compensation Law for specific injuries resulting in permanent disability. All industrial surgeons should be acquainted with this schedule. They should know how much an employee is entitled to for loss of vision of one eye, amputation of hand at wrist, or forearm at elbow, arm at shoulder, etc., also that an injured employee is entitled to compensation for specific injuries resulting in permanent disability in addition to what is termed "temporary total compensation" during the healing period. Knowledge of this fact should make it easier to estimate disability in cases involving permanent partial loss of use of the various members of the body, covered by the specific schedule.

Surgeons should be familiar with the permanent partial disability section of the law which compensates for permanent disability to the injured employee as a whole, or working unit basis. The maximum compensation payable under this section is about four thousand dollars. Here the age of the injured is taken into consideration, and he will receive such percentage of the maximum as his age entitles him, based upon his life expectancy; in other words, the younger he is, the more will be his allowance, due to greater expectancy.

Injuries caused by third parties, not in the same employ, are not covered by law

unless the injured employee who is being treated elects to accept compensation rather than to proceed against such third party, and if the election to proceed against the third party is made, then the compensation carrier and employer are not responsible for the expense of medical and hospital treatment. Frequently this fact is overlooked by the surgeon and many cases take weeks of Industrial Commission hearings before responsibility is decided. The medical profession, through its publications, should discuss these matters and should be informed of Industrial Commission proceedings and decisions made in compensation cases involving medical questions.

Again surgeons do not realize the importance of prompt reports. How is an insurance carrier to know whether to assume or deny liability in a given case without the reports of the attending surgeon? Surgeons must know that compensation payments are based almost wholly upon the medical evidence as to the degree of disability and the probable period such disability will exist.

Often the question pertaining to possible disability is answered, "I don't know." Can you conceive of that information which is no information at all, being of any value to a claim man or to the Industrial Commission? It is most important that you do know what reasonable period of disability may be expected. Large insurance carriers estimate that it costs at least 16 cents to send out a letter. Some surgeons have to be asked several times to send in their reports. During this period an injured laborer is without compensation and may be hungry. After the first report, many surgeons will not cooperate with supplemental reports, showing progress of the case. These supplemental reports are the basis for further compensation payments. And strangest of all, it oftentimes requires several letters to get a surgeon to render his bill, although the injured has been discharged and has returned to work. Bills should be submitted promptly, as soon as treatment is terminated, and specific request for bills should not be necessary.

In billing, the fee schedule of the Commission should be followed. These fees, on

the whole, are adequate, the schedule having been arranged by a Committee of industrial surgeons selected to act by the State Medical Society. And let it be said here that the schedule as submitted by this Committee, was accepted in its entirety, except that the Commission raised the fee for gas anesthesia above the price submitted. Many surgeons, even those who do a great deal of industrial surgery, will follow the schedule in the general run of cases, but will attempt to exceed the schedule allowance when they treat a case which is a little out of the ordinary, or a trifle more severe than usual.

The value of x-rays has long been known to insurance carriers. Often the taking of x-rays is neglected when it is obvious that this evidence should be presented. Yet the indiscriminate taking of expensive x-rays is to be deplored. In many cases, particularly when the surgeon has his own x-ray equipment, there seems to be a tendency to run up as big an x-ray bill as possible. If surgeons would attempt to hold these bills within reason, a great amount of unnecessary expense might be eliminated.

Another question, apparently not easily remedied, is the wide difference of the estimates of permanent disability by different surgeons. One surgeon will estimate the degree of permanent disability at 10 per cent, whereas another will estimate the same case at 50 or 60 per cent. There is no fixed rule or table for measuring permanent disability, yet it does not seem that there should be such a wide difference of opinion between surgeons, and a better knowledge of application of the law governing permanent disability would no doubt help to equalize and eliminate this error.

Many surgeons, who are convinced in their own minds as to whether a certain permanent disability is caused by trauma or other causes, hesitate when reporting or testifying to give a definite opinion in the matter. Usually the testimony is to the effect that "this or that is possible—the injury may have lighted up this condition or caused it, but I can't say one way or the other." All of this may be true, but a surgeon should

have a definite opinion, which he should give for what it may be worth in the determination of the issue involved.

In the case of hernia, claim men have a well defined idea that the medical profession recognizes all hernia as congenital. With the present law, there are three things necessary for a claimant to prove, in order to bring his hernia case within the Act:

1. That he had no hernia prior to the accident.
2. That he suffered an injury.
3. That the injury was accompanied by pain and nausea.

Claim agents contend that in at least 33 per cent of the cases, where the claimant has not been advised on the subject, he fails to prove his claim. Is it the modern tendency of the surgeon to familiarize the claimant with these facts in order that a surgical operation may be procured? All hernia cases should be set for hearing before the Industrial Commission so that strict proof may be had under the statute, and no operation should be done in uncomplicated hernia until such hearing has been held.

Another serious question is now occasionally confronting the Industrial Commission, namely, compensation for appendicitis. For years all such cases were denied, and the medical profession practically presented a united front to the effect that appendicitis was not the result of trauma. But within the last two years, there have been presented several cases where medical evidence was given that trauma caused the attack or aggravated a condition which caused rupture of the appendix.

Most insurance carriers have a list of staff surgeons to whom they desire their policy holders to send injured employees for treatment in cases of accident arising under the law. This practice is defended on a number of grounds as follows: The law gives the insurance carrier the right to select the surgeon to treat injured employees of the policy holder. By using such surgeons, the claimant receives less temporary disability and less permanent disability than he would if he were allowed to select his own surgeon. The right of control should be in

the hands of the one who pays for the treatment. Surgeons of recognized ability, who not only render excellent treatment, but cooperate in the matter of reports, and appear at hearings promptly upon call, are the ones selected. Surgical training, experience and knowledge of legal provisions are the requirements. This experience and knowledge is of inestimable value to the insurance carrier. Many an injured employee becomes a confirmed neurasthenic and is ruined for life by the chance remark of an inexperienced surgeon. Insurance carriers say shock develops neurasthenia and contend upon rational lines that immediate repair often done in shocked condition of injured employee may not kill him, but can make a compensable neurasthenic out of him from then on. Too much sympathy on the part of an industrial surgeon may produce equally poor results.

Compensation cases require more time and work on the part of the surgeon than private cases. If a surgeon expects to do this work, the requirements must be met. In making up the list of surgeons for any given company, those men selected are the ones who are known to the Company as meeting the requirements, and the fact that this work is confined to a few is not a reflection upon the ability or integrity of other surgeons, but a matter of good business on the part of the insurance carrier.

If bills are padded, if dressings are made too frequently, if a case is prolonged unnecessarily, it should be realized that an experienced claim man, chosen for his keenness and understanding of human nature, educated to be on the defensive by necessity, in a position to have access to and compare thousands of similar cases, will become wise to any situation almost immediately. While proving a padded bill may be almost impossible, avoidance of the guilty surgeon will be the result in the future.

The attitude of insurance carriers is that the claimant should receive all that he is entitled to by law. No man is to be deprived of compensation to which he is legitimately entitled, and not one thing more

should be exacted of an insurance carrier than that which he should be responsible for under the compensation act.

Absolute honesty and fairness must prevail. The surgeon must be fair to claimant, fair to insurance carrier, and fair to himself if he would succeed in industrial work. If

this fact is kept in mind, a great deal of good may be accomplished. Injured employees will be restored to usefulness. Malingerers will be circumvented. Fake claims will be reported and the intent and purpose of the Workmen's Compensation Act will be carried out with value to society.

NATURAL AVOIDANCE OF CONCEPTION*

CYRUS W. ANDERSON, M.D.
DENVER

This paper is a preliminary report upon a work in which I am intensely interested at this time and which I am convinced will prove to be valuable when sufficient data can be collected. Data of this character has been difficult to obtain in the past for various reasons. In the first place little or nothing was known up until three years ago concerning the time of ovulation in the human female. Lacking this knowledge there was no scientific basis for determining just when conception took place and when it was theoretically impossible. After centuries of absolutely erroneous teaching in regard to so-called "safe periods," it is not surprising that physicians as well as patients have scorned the idea of there being any such thing as a safe period.

Woman has come to be regarded as an animal defying laws of reproduction which hold good for all other species. Conception cannot and does not take place in other mammals except at rhythmic intervals. The average woman does not keep a permanent record of menstruation, and usually if she keeps any record at all it is done in a haphazard way by making a mark on some calendar sheet which is torn off and thrown away from month to month. My contention is that a permanent record of menstruation and ovulation should be kept by every woman. Certainly no difficulty or objection can be found to keeping a record of menstruation, and in my limited experience I have found that the majority of women can be taught to know when they ovulate. By pointing out the distinct advantages in regard to marital relations and birth control,

I find my patients eager and willing to cooperate in keeping these records. In order to simplify this procedure I have perfected a slide rule which when set and adjusted for each individual patient shows at a glance the safe periods, the time when ovulation should occur, the time when conception is most likely, and has a space on the reverse side for a permanent record of menstruation and ovulation. My interest in this study began about two years ago while I observed in the course of an operation, as many of you have, a freshly ruptured graafian or ovarian follicle. Certainly if we saw similar, shall I say, lesions in any other organ we would expect to associate them with symptoms of some sort illicit by the patient. Does it not seem reasonable that a woman should be able to tell when a rupture or perforation of this delicate organ, the ovary, takes place, even though it is a regular normal monthly occurrence? I determined to work out this problem. Naturally the one who afforded me the best opportunity to study was my wife, and I am indebted to her for her very accurate records. I wish to apologize for reference to such an immediate member of my family, but she made an ideal subject for this study for several reasons. In the first place, she has kept an accurate record of her menstrual periods since October 6, 1917—nearly sixteen years. In this sixteen years her menstruation has been regular and normal with few exceptions, occurring on an average interval of twenty-nine days, the shortest interval being twenty-six, and the longest about thirty-nine days. She had never been aware of intermenstrual pain or any other symptom of ovulation previous to my study. She had

*Presented before the Denver County Medical Society, May 16, 1933.

experienced four normal pregnancies occurring in the years 1923, 1925, 1927, 1930. She had had no miscarriages. Acting upon the information of recent investigators of the subject—that ovulation occurred somewhere between the twelfth and the eighteenth days following the onset of menstruation—I asked her to note and report any symptoms (no matter how slight) in the nature of a cramp, dull ache, bearing-down sensation, or feeling of weight in the pelvis. Much to her surprise she was able to note that within this “mid-period” she had symptoms which were of such character that she could identify them as being different from any others which might occur concurrently, such as intestinal cramping from gas, indigestion, et cetera, and yet they were so slight that although she probably has had them all throughout her menstrual history she had never paid any attention to them. After a couple of months she began recording ovulation along with her permanent record of menstruation. The result is the following table:

Menstruation	Ovulation	Interval
June 12, 1932.....	June 27.....	15 days
July 10, 1932.....	July 23.....	13 days
August 6, 1932.....	August 25.....	19 days
September 7, 1932.....	September 24.....	14 days
October 7, 1932.....	October 26.....	19 days
November 8, 1932.....	November 20.....	12 days
December 2, 1932.....	December 20.....	18 days
January 4, 1933.....	January 17.....	13 days
January 29, 1933.....	February 13.....	15 days
February 25, 1933.....	March 11.....	14 days
March 23, 1933.....	April 8.....	15 days
April 22, 1933.....	May 7.....	15 days

Interval between menstruation and ovulation varies between 12 days, shortest, and 19 days, longest, interval. Average, 15.3 days. Variation, 7 days. Rearranging this to show the interval between ovulation and menstruation, we have the following table:

Ovulation	Menstruation	Interval
June 27, 1932.....	July 10, 1932.....	13 days
July 23, 1932.....	Aug. 6, 1932.....	14 days
August 25, 1932.....	Sept. 7, 1932.....	13 days
September 24, 1932.....	Oct. 7, 1932.....	13 days
October 26, 1932.....	Nov. 8, 1932.....	13 days
November 20, 1932.....	Dec. 2, 1932.....	12 days
December 20, 1932.....	Jan. 4, 1933.....	15 days
January 17, 1933.....	Jan. 29, 1933.....	12 days
February 13, 1933.....	Feb. 25, 1933.....	12 days
March 11, 1933.....	March 23, 1933.....	12 days
April 8, 1933.....	April 22, 1933.....	14 days

Ovulation to following period thus varied from 12 to 15 days. Average, 13 days; variation, 3 days.

The uniformity with which menstruation followed ovulation, and the variance between menstruation and ovulation, in this one case led me to suspect that ovulation determined the time of the following period and, in searching the literature, I found that Ogino says, “The peak of ovulation determines the following menstrual period and has no connection with the preceding one.” Also, says he, “Ovulation always occurs between the twelfth and sixteenth days preceding the next menstruation.” Knaus has shown by extensive study that the unmated egg cell retains germinating ability only for about twenty-four hours after it leaves the ovary. I arbitrarily decided that to begin with, four days would be safer to rely upon. Patients who came to me for birth control advice were then instructed to watch for symptoms of ovulation, and when they were able to distinguish the symptoms they could absolutely rely upon a safe period beginning four days later. Most of these patients were sufficiently interested to watch for symptoms. In nearly every case, where instructions were carefully followed, they were able to tell when ovulation took place and in not a single case has there been a pregnancy in patients using this safe period. I do not have sufficient data to report these cases in detail as yet; however, similar findings have been reported by reliable authors. Siegel in his studies in Germany during the war reports that “conception did not result in a single case when the husband’s return coincided with the twenty-third day after the beginning of menstruation.” Ogino, after seven years’ experimentation, says, “Cohabitation after the term of ovulation has remained sterile in spite of attempts made many months throughout many years.” Other investigators who took statistics during the world war, while they admit a comparative safe period preceding menstruation, are not willing to admit a definite sterile or safe period. Dickinson reports quite a large series of cases in which he estimates that the chances of pregnancy in this period are about 7 per cent. Admitting this figure to be correct, an explanation will be offered later in this paper. Many will doubt my statement that the majority of women should

be able to tell when they ovulate. In scanning the literature I found that intermenstrual pain as a pathologic entity is often described. In 1872, Sir William Priestly first described a condition to which he gave the name "Intermenstrual pain." By the Germans the condition is spoken of as "mittelschmerz." Emil Novak, in his monograph, "Menstruation and Its Disorders" (1928), devotes a short chapter to the subject. Quoting from this article in regard to the frequency of occurrence, "The total number of cases reported in the literature is not very large, but all those who have written on the subject insist that the condition is by no means as rare as is generally believed. Theilhaber emphasizes the fact that careful inquiry into the history will place in this category many cases which otherwise would pass unnoticed." Kelly gives a record of a typical case of intermenstrual pain showing periodicity with a chart similar to mine and remarks that the date of the approaching period could be foretold from the day when the intermenstrual pain appeared. Both Kelly and Heany emphasize the frequency with which sterility is observed in women subject to intermenstrual pain. Bear in mind that we are now speaking of pathologic intermenstrual pain, viz., ovulation symptoms which are severe enough to cause the woman to consult a physician. (I found only one author who claimed that he could detect what he termed intermenstrual congestion in one-third of one thousand women. Pierra reports increase in the size of ovaries, tubes, and uterus, and tenderness in pelvic nerves—which symptoms he said might indicate the ovulation period.) My explanation of the fact that patients with severe intermenstrual pain are frequently sterile, is that women who suffer with excessive intermenstrual pain refrain from intercourse at this most fertile time because intercourse hastens ovulation and they soon learn that intercourse at this period brings on their pain. Palmer, in 1892, was probably the first to guess the etiology of intermenstrual pain. He considered it to be an oöphoritis or perioöphoritis which prevented the rupture of the graafian follicles. Little or no attention was paid to him however, for

although Novak in his monograph mentions Palmer's explanation in his discussion of the etiology, he begins the paragraph with the statement, "Practically nothing of definite nature is known concerning the etiology of this interesting disorder." We must remember, however, that the time of ovulation was not definitely proved until about three years ago. I shall endeavor to describe the symptoms caused by the rupture of a graafian follicle. I have chosen to designate this rupture in itself as ovulation, although the term ovulation in its full meaning includes both the growth and the expulsion of the unfertilized ovum. The actual time of expulsion and a short interval thereafter is the only part of the process which should give rise to symptoms. These symptoms are rather difficult to describe and vary in severity from the normal heretofore unnoticed discomfort to pain in occasional cases sufficient to seek medical aid. A composite picture of these symptoms is as follows: "A mild, cramp-like pain coming on suddenly, followed by a sort of bearing-down sensation or feeling as if the bottom had dropped out of the pelvis, and lasting only a couple of hours. The pain is comparable to a gas pain low down in the pelvis and is very mild but unmistakable once it is discovered. It is unlike any other sort of pain." In regard to these symptoms, the following questions have been brought to my attention. Is it advisable to bring to a woman's attention symptoms which heretofore have been unnoticed? Will not the majority of women be constantly looking for and finding pain whether or not it actually exists? I do not think so. There is only a period of four or five days in which she need to look for the symptoms. The duration of the pain is so short that should she find symptoms all throughout that period you can be sure that she has not learned to differentiate them. All of the women whom I have instructed thus far have displayed a keen interest in watching for symptoms and once they have been discovered they seem to get a sense of well-being, comfort, and satisfaction knowing that after allowing three or four days' time for the death of the ovum they need not fear conception from inter-

course on the following ten days up to the time of the next menstruation. They also can figure the exact day when the next menstruation will begin.

Since the time I started to write this paper so much convincing evidence from good authority has come into my hands that I have extended the safe period to cover a much longer time than I had originally intended, so that it extends in the twenty-eight day or longer cycles, not only up to the beginning of menstruation, but throughout the menses and for four days following. This is almost as liberal as the time allowed by Latz in his book called "Rhythm," which is based on the Ogino-Knaus theory. I feel that some explanation is necessary here, for no less an authority than Dickinson makes the statement that "Conception during menstruation is relatively frequent (about 13 per cent), and in view of the common avoidance of intercourse during the period the percentage here quoted may indicate a lower capacity for conception than actually exists." I noticed in Dr. T. Mitchell Burns' private notes he criticizes Latz for his disregard of these statistics. These statistics are in all probability accurate; however, even accurate statistics are often misleading, and I can offer an explanation. Dickinson's statistics were collected without grouping the cases as to the length of their menstrual cycles. You will notice that I qualify my statements as regards sterility during and after the menses to women having menstrual cycles of definite lengths. There are women who menstruate every two weeks. Most authorities agree that ovulation takes place twelve to sixteen days before the onset of menstruation. If this is true in the case of the woman who menstruates every fourteen days, my contention is that there is an overlapping of the cycle and that a second ovulation is taking place before menstruation has completed the first cycle. This will account for at least some of the pregnancies which occur from intercourse in the week preceding menstruation and will also account for some of the cases who menstruate once after conception has taken place. In an exhaustive study of 4500 menstrual his-

tories by Sanes, 3.8 per cent of women menstruate every twenty-one days. These women ovulate very shortly after menstruation. The æstrus period for these women should occur then during menstruation which accounts for their indulgence at this time, and Hoehne has shown that menstrual blood is a particularly favorable medium for the persistence of the motility of the sperm. Theoretically, coitus just before or during menstruation for these women with short menstrual cycles should result in a high percentage for fertilization and pregnancy, because, although the menstruating uterus is not at this time in a receptive condition for the newly fertilized ovum, Ogino has demonstrated that it takes ten days for the ovum to reach the uterus—at which time it should be in an excellent receptive state. I think that I am safe in saying that intercourse during menstruation is not nearly so common in women having longer cycles, and Dickinson's statistics are still probably accurate, but his suggestion for coitus during the period as means of overcoming sterility will fall flat except for three or four per cent, viz., these women with short cycles. I have recommended this practice in many cases without results.

I have just spoken of the æstrus period in the human female. Most authorities who have worked with animals have regarded this period or phase as lacking or having been lost in woman. Perhaps this is true as far as outward indications are concerned, but Papanicalaou, who in 1917 pointed out by vaginal smears a typical congestive or pseudomenstrual stage in the guinea pig closely resembling menstruation in women, has by the same method (in an article to be published soon) demonstrated four distinct vaginal cycles in the human female: First, the "menstrual or congestive phase" from the first to the seventh day. Second, the follicular or copulative phase from the eighth to the twelfth day. (Note that this æstrus phase comes just where it should be in the twenty-eight day cycles.) Third, the proliferative from the thirteenth to the seventeenth day. Fourth, pre-menstrual from the eighteenth to the first day.

Condensing the information at hand we have the following facts:

1. The process of ovulation normally goes on in a regular cyclic or rhythmic succession.
2. Ovulation always occurs twelve to sixteen days preceding the next menstruation.
3. In most mammals it is spontaneous, i. e., maturation and spontaneous rupture of follicles occurs whether or not there has been copulation.
4. Sexual intercourse may hasten ovulation. In the rabbit, cat, and ferret, copulation must occur.
5. The unmated egg cell retains germinating ability only for about twenty-four hours after it leaves the ovary (Knaus).
6. The sperm lose their power to fertilize the ovum after two or three days in the female genital tract.
7. The motility of the sperm is no indication of its power to fecundate (Moench). On these facts the Ogino-Knaus theory expounded by Latz is based. This theory in brief is that the period during which the woman is apt to be fecundated does not exceed seven or eight days (five days for ovulation and two or three days for the life of the sperm).

Conclusions

1. Women can be taught to recognize the symptoms of ovulation.
2. Women should be taught to keep a permanent record of ovulation as well as menstruation.
3. Women who have regular menstrual cycles have definite safe periods upon which they can depend.
4. Determining the exact time of ovulation in each individual case greatly reduces the chance of error in determining the safe period.
5. The Ogino-Knaus theory is based on sound facts and will hold good if errors are not made in using the simple blanket formulas and calculations.
6. No physiologic law can be 100 per cent reliable and this theory is no exception. However, there is much certainty that preg-

nancy will not occur during the sterile periods.

REFERENCES

- ¹Ogino, K.: Ovulationstermin und Konzeptionstermin. *Centralblatt für Gynäk.* 54-464, 1930, and *Centralblatt für Gynäk.* 56-721, 1930.
- ²Knaus, H.: Ueber den Zeitpunkt der Konzeptionsfähigkeit des Weibs. *Archiv f. Gynäk.* 146-343, 1931. *Muenchner Med. Woch.* 10-344, 1931, and *Die Medizinische Welt*, 4-315, 1930. Ueber den Einfluss der Bauchhohlentemperatur auf die Befruchtung und Bewegungsfähigkeit der Spermatozoen. *Allg. D. Heb. Ztg.*, H 15-291, 1930.
- ³Grosser, Otto: Embryonalentwicklung Konzeptions und Ovulationstermin. *Centralblatt f. Gynäk.* 56-706, 1932.
- ⁴Siegel, P. W.: Wann ist der Beischlaf Befruchtend. *Deutch Med. Woch. Nr.* 42-1251, 1915.
- ⁵Dickinson, L. R.: Safe Period as a Birth Control Measure. *Am. J. Obst. and Gyn.*, 14-718, 1927.
- ⁶Priestly, Sir Wm.: Causes of Intermenstrual or Intermediate Dysmenorrhea. *Brit. Med. J.*, 2-431, 1872.
- ⁷Novak, E.: *Menstruation and Its Disorders*. D. Appleton and Co., 1928.
- ⁸Theilhaber, A.: Zur Pathologie und Therapie des Sagennanten Mittelschmerzen. *Arch. f. Gynäk.*, 93-554, 1911.
- ⁹Kelly, H. A.: *Medical Gyn.*, N. Y. D. Appleton and Co., p. 676-8. 1908.
- ¹⁰Heaney, J. H.: Periodic Intermenstrual Pain. *Surg. Gyn. & Obs.*, 11-361, 1910.
- ¹¹Palmer, C. D.: Periodic Intermenstrual Pain. *Am. Jour. Obst.* 25-328, 1892.
- ¹²Latz, L. J.: *The Rhythm*. Latz Foundation, Chicago, 1932.
- ¹³Sanes, K. I.: Menstrual Statistics. *Am. Jour. Obst.*, 73-93, 1916.
- ¹⁴Hoehne, O.: *Verh. d. Deutsch. Ges. für G. & G.*, 2-514, 1913. *Zentralbl. f. Gyn.*, 38-509, 1914.
- ¹⁵Papanicalaou, G. N.: Dioestrous Cycle in the Guinea Pig. *Am. J. Anat.*, 22-225, 1917.
- ¹⁶Hammond, J., and Asdell, S. A.: The Vitality of the Spermatazoa in the Male and Female Reproductive Tracts. *Brit. Jour. Exp. Bio.*, 4-155, 1927.
- ¹⁷Moench, G. L.: Methods of Examining Sterile Couples. *Monatschr. f. Geburtsh. u. Gynäk.* 90-150, 1932.

Seven Wonders of Medicine

Dr. Bowman C. Crowell, associate director of the American College of Surgeons, at a community health meeting held in St. Louis during the recent annual session of the college, listed the seven wonders of medicine as follows:

1. Immunity or resistance to diseases.
2. Anesthesia and analgesia giving relief from pain.
3. Antisepsis preventing wound infection and blood poisoning.
4. Knowledge of vitamins and food values.
5. Light and ventilation.
6. Organotherapy such as feeding liver to pernicious anemia patients, giving insulin to diabetics, and thyroid gland extract to cretins.
7. Periodic health examinations to prevent the effects of certain diseases such as cancer.

ACUTE AND CHRONIC SINUS DISEASE

MORE ABOUT THAT BANE OF THE RHINOLOGIST'S EXISTENCE

FRANK CARROLL, M.D.

FORT COLLINS

The article in the J. A. M. A. of February 11, 1933, by Dr. Ferris Smith of Grand Rapids, Michigan, on "Chronic Sinus Disease," interested me keenly, yet I do not agree with him that there is no successful treatment for this distressing condition without the use of extensive surgical procedure. In common with many rhinologists who have treated sinus disease for long years, I feel that the suffering patient, as well as the physician, has been much disappointed in end results. Surgery of the various sinuses has been extremely unsatisfactory, and but little more could be said of any form of treatment.

However, in very recent years a treatment has been devised which will give relief. If persisted in as it should be, a permanent cure is obtained in many cases. This treatment will succeed in all cases except those which have been mutilated by so-called radical cure surgery. The treatment will succeed splendidly in recent acute cases of sinus disease and will also produce the desired result in chronic cases of long standing provided the treatment be persisted in for a sufficient length of time.

A certain amount of surgery is essential, but in this the sinuses themselves are let severely alone. This surgery consists in removing anything in the nostrils which blocks the entrance to the normal sinus ostia. Polypi are removed, septa resected when necessary and if the middle turbinates obstruct the normal ostium, such portions of these middle turbinates are removed as will leave the ostium freely opening into the nares. I often tell my patients that these obstructions act in the same manner as a cork in a bottle and that free drainage cannot be hoped for until these obstructions are removed.

In acute cases, treatment should begin at once and the necessary surgery, which will aid materially in preventing a return of the

disease deferred until the acute symptoms have subsided. Having cleared the nostrils of these mechanical obstructions and allowed sufficient time for healing to take place, we are now ready to proceed with the treatment.

First we pack the nose with cotton pledgets soaked in 10 per cent ichthyol in glycerine. One small pledget on each side should be placed high up, above the normal ostium and above the middle turbinate. Larger pledgets should be placed over the inferior turbinates on each side and these pledgets should extend back the full length of the inferior turbinates. With the pledgets in place and our patient provided with plenty of towels to catch the drip, we next place him under a strong infra-red lamp in such position as will allow the heat to strike him full over the frontal and ethmoid sinuses and allow him to remain under the heat for twenty minutes. The packing with ichthyol and the application of the infra-red ray is used to empty the cells of the mucous membrane in the nares of the secretion with which these cells are filled and thus materially decongest the whole of the mucous membrane in the nostrils. After the application of the infra-red and the removal of the pledgets, have the patient lean forward and blow the nose to clear it of the material released into the nares by our medication and the infra-red.

Next, examine the nose, and if there still remains a swelling of the mucous membrane, apply adrenalin or any decongestant to cause complete contraction of the membrane and to leave the natural sinus ostia free to drain into the nasal space or vestibules. Then have an irrigator holding about two quarts of warm normal saline solution suspended some distance above the head of the patient and preferably over a sink. A rubber tube from the irrigator has on the end a hard rubber nasal tip with an opening about one-fourth inch across. Another nasal tip of the same size is attached to a

suction apparatus operated by a water pump.*

The patient is then instructed to place one tip in each nostril and place the head down in the sink in the same position as if standing on the head. To draw a full breath, close the mouth and hold the breath. The clip is then released on the irrigator, allowing the warm normal salt solution to flow into one nostril, into the sinuses on that side, across to the other nostril and into the sinuses on that side. At the same time, the water tap is opened allowing the suction to operate. The gravity effect from the elevation of the irrigator jar and the suction caused by the water pump will allow the normal salt solution to fill and thoroughly wash each and every sinus and the results easily show in the jar of the suction apparatus. After allowing a quart, at least, of the irrigating solution to flow into one nostril, reverse tips and allow the irrigating fluid to flow up opposite nostril, using suction and irrigating simultaneously as before. This combination of irrigator and suction apparatus will effectually cleanse all sinuses and is not at all disagreeable to the patient if care is taken in the operation of the apparatus. The treatment should be used once or twice a day, depending on the severity of the case. Relief from the distressing sinus pain will be experienced immediately following the first treatment and the continued use of the treatment will eventually produce the desired result.

There is one class of cases that this method will control but will not cure—cases which have been severely operated upon. I have cured every primary acute case which has come to me, all chronic cases which have never been operated upon, but I have failed in a number of cases where the frontals and ethmoids have been operated upon intranasally and have also failed in some cases where radical antrum operations have been performed. Acute cases require from one to three weeks of daily treatments to

perfect a cure; chronic cases from four to twelve weeks.

Summary

1. The first requisite in the successful treatment of sinus disease is to remove obstructions from the normal ostia.
2. Avoid all other surgery.
3. Give treatment often enough to keep patient free from pain.
4. At each treatment, continue irrigation and suction until solution comes into wash bottle clear.
5. Do not expect a few treatments to perfect a cure, and above all things, do not tell patient that he will not have sinus trouble again. The same conditions which caused it the first time may produce it again.
6. The treatment of sinus disease has heretofore been unsatisfactory both to the patient and the physician.
7. The treatment here outlined is not difficult to administer, is not displeasing to the patient, is practically painless, and affords more positive assurance of a cure than any other yet devised.

EARLY DIAGNOSIS

GASTRIC CANCER

R. K. DIXON, M. D.
DENVER

The successful treatment of carcinoma of the stomach is directly dependent upon its early diagnosis. The diagnostic features of the typical, well advanced carcinoma of the stomach are well known. It must be emphasized, however, that early in the course of the disease, there are no characteristic clinical features, and, if the condition is to be recognized early enough for successful treatment, the lesion must be discovered before it has produced characteristic signs and symptoms. The advances of the past twenty years in the roentgenological examination of the gastro-intestinal tract have contributed materially to the early diagnosis of cancer of the stomach.

It is sad to reflect that Russel D. Carman, who contributed so generously to the

*Wregg, Inc., 279 Second Ave., New York, put out this entire apparatus, irrigator and suction pump complete.

advances made in the x-ray interpretations of cancer of the stomach, should have himself been a victim of the disease. Carman¹ repeatedly emphasized the importance of early diagnosis. A quotation from one of his papers on Roentgenologic Diagnosis reads as follows: "Since operation offers the only hope of cure, it is of the utmost importance that the diagnosis be made early and before the lesion has become inoperable." When patients suffering with malignancy of the stomach finally reach the gastro-enterologist or the Roentgenologist, from 90 to 98 per cent of the malignant lesions can be readily demonstrated by means of the Roentgen ray. It is scarcely necessary to urge that full use be made of this highly efficient method of diagnosis.

The ability to visualize early small lesions is directly dependent upon the examiner's skill and experience in the use of fluoroscopy with palpation of the stomach. The examination should be made both in the vertical and horizontal positions—the latter particularly when attempting to visualize a lesion at or near the cardia. Even the taking of multiple films will fail in a high percentage of instances to show early lesions. The films should serve only as checks on the fluoroscopic examination and the fact that the lesion seen in the fluoroscope is not seen in the film should not prevent the examiner from giving a positive opinion.

If cancer is to be recognized early, it must be remembered that it occurs at all ages. The average age in a series of 1,000 cases of carcinoma of the stomach reported from the Mayo Clinic was fifty-four years; 37.6 per cent were between forty and forty-five years of age. Cancer is not uncommon in people between thirty and forty years of age and occasionally occurs in youth.

The absence of free hydrochloric acid in the stomach has for many years been considered a pre-requisite to the diagnosis of carcinoma of the stomach. Especially in early cases, the presence or absence of free hydrochloric acid is of little diagnostic significance. In a series of 1000 cases of carcinoma of the stomach reported by Balfour², free hydrochloric was found in 43.8 per cent.

It is not particularly uncommon for pa-

tients with carcinoma of the stomach to have an associated marked anemia. Other symptoms referable to the stomach may be entirely absent. Therefore, it is very important in the investigation of anemia of unknown etiology to exclude neoplasm in the stomach. As pointed out by Rivers³, carcinoma of the stomach rarely is the cause of hematemesis. Rivers worked up a series of 411 cases that gave a history of gross hemorrhage from the stomach. "In only 1 per cent of the entire series was gross bleeding found to be attributed to carcinoma." Occult bleeding, however, is almost continuously taking place from malignant lesions, and this is one of the most reliable signs in relation to neoplasm of the gastro-intestinal tract. If the stools are consistently negative for occult blood, this can be interpreted as strong evidence against a malignant lesion being present. On the other hand, if the technic of testing for occult blood is properly carried out and other obvious sources of bleeding are eliminated, the presence of occult blood in the stool calls for careful investigation.

If, in any given case, there is a clinical history suggestive of a lesion in the stomach or intestinal tract and occult blood is repeatedly present in the stools, the patient deserves the benefit of abdominal exploration even though the lesion cannot be demonstrated by x-ray. Such cases require keen clinical judgment. Early diagnosis and operation may save the patient's life, while procrastination until the lesion is obviously demonstrable may mean that the time has passed when successful treatment could have been carried out.

It is impossible to consider the early diagnosis of cancer of the stomach without at the same time considering benign gastric ulcer. It is not within the scope of this paper to discuss the different schools of thought as to what percentage of cancers develop on a previously existing ulceration of the stomach. Bueerman⁴ made a very comprehensive study of the subject and brought out several points that are worthy of brief mention. (1) Carcinomatous gastric ulcers are highly malignant, 78.9 per cent occurring in grades 3 and 4, the higher

grade of malignancy according to Broder's classification. (2) Carcinoma develops upon ulcer infrequently. (3) Of the 1142 gastric cancers studied by Bueerman, only 3.8 per cent gave an ulcer type of history of five years or over as compared with a group of 200 benign gastric ulcers, 53.9 per cent of which gave a history of five years or more. (4) Finally, the clinician, the roentgenologist, and the surgeon all err in a relatively high percentage of instances in attempting to differentiate benign and malignant ulcers of the stomach. The subject was recently very well summarized by the following paragraph published in an editorial in the *Journal of the American Medical Association*⁵: "It would seem that the question of percentage of gastric ulcers becoming malignant is purely academic, and the most important and practical issues underlying the whole problem is that there are no known criteria by which the clinician, the roentgenologist or the surgeon can decide definitely the exact nature of a given ulcer. Microscopic examination alone will reveal its true nature." In the face of these conclusions, it is apparent that gastric ulcer should be treated medically only when certain mitigating circumstances make the risk of operation greater than the possibility of error in diagnosis, and then should be done under constant and continued clinical and roentgenological observation.

In spite of our increasing knowledge of the subject and with perfected aids in diagnosis, the death rate from gastric cancer remains high while the successful operability rate remains discouragingly low. There is little possibility of further progress in successful treatment of cancer of the stomach until the layman thoroughly realizes the importance of early examination of all persons with gastric complaints. It is equally important that the physician fully appreciate his responsibility and recognize his inability to separate the symptomatology of gastric malignancy from benign lesions or functional disturbances of the gastro-intestinal tract without first carrying out a thorough clinical and laboratory investigation.

REFERENCES

¹Carman, Russell D.: The Roentgenological Diagnosis of Gastric Cancer. *Southern Medical*

Journal, Vol. 15: 20-27, 1922.

²Balfour, Donald C. and Hargis, Estes H.: Cancer of the Stomach. *American Journal of Medical Sciences*, Vol. 163: 773, June, 1927.

³Rivers, Andrew B.: The Significance of Hematemesis. *Texas State Journal of Medicine* Vol. 26: pp 492-499, Nov., 1930.

⁴Bueerman, W. H.: A Clinical and Pathological Study of the Carcinomatous Gastric Ulcer. *Wes. Jour. Surg., Obst. & Gynec.* 38:680 (Nov.), 1930, and subsequ. nos.

⁵Editorial, *Journal of the American Medical Association*, Vol. 99: No. 22, 1864-1866, Nov. 26, 1932.

CASE REPORTS

ABLATIO PLACENTAE; A REPORT OF FOUR CASES

P. W. WHITELEY, M.D.,
and C. W. DORSEY, M.D.
DENVER

The following four cases are reported from the Denver General Hospital, and were seen during a four month service, on which there was an average of sixty deliveries per month, giving an incidence of nearly one and two-thirds per cent.

CASE 1

Mrs. A. M., white, aged 18; para 1, was admitted to the hospital on July 27, 1931, on which date she was first seen in the prenatal clinic. Her complaints were as follows: Enormous swelling of the hands, feet and legs, and headaches. Her last menses began on Dec. 10, 1930. Her past history was irrelevant, as also was her family history. Physical examination revealed a well-developed and well nourished young white woman with extreme swelling of the hands, feet, and legs. The abdomen was rounded, and the fundus of the uterus was palpable, the uterus being the size of a seven months pregnancy. The heart and lungs were normal, B. P., 168/90. The following laboratory reports were made on July 29, 1931. Urine: specific gravity, 1.025; albumin, 3 plus; many hyaline casts. The Wassermann was negative. Blood: hgb., 75 per cent; leucocytes, 5,000; erythrocytes, 3,320,000. Blood chemistry: N. P. N., 48 mg.; urea N., 25 mg., creatinine 2 mg. A diagnosis of (1) pre-eclamptic toxemia or (2) nephritic toxemia was made. The patient was given the usual dietary and medical treatment for the condition, but the blood pressure remained at approximately the same level. At 8:30 p. m. on Aug. 1, 1931, the patient began to have slight pains and a little bleeding. At 9:30 p. m. the B. P. was 185/100, and as the pains were very severe, the patient received morphine sulphate gr. 1/4 hypodermically at this time. Slight bleeding with clots continued during the night, and the pains remained strong. Morphine sulphate gr. 1/6 was administered hypodermically at 7:00 a. m. on Aug. 2. At 8:00 a. m. the bleeding increased. Rectal examination at 11:00 a. m. revealed complete cervical dilatation, so the patient was removed to the delivery room and the membranes were ruptured. A stillborn male baby

weighing 4 pounds was delivered at 11:30 a. m. The placenta was depressed in approximately one-half its entire surface, and exhibited firm blood clots. The patient made an uneventful recovery, and was dismissed from the hospital in good condition on August 13.

CASE 2

Mrs. E. M., colored, aged 24, para 4, was admitted to the hospital at 10:20 a. m. on July 9, 1931. She was bleeding profusely at the time. Clots were also being passed. Her present illness began at 6:00 a. m. the same day, with a sudden severe abdominal pain followed by hemorrhage. There was no pain at the time of admission. Her last menses were on Dec. 1, 1930, and she had slight bleeding at intervals until April, 1931. During this time she was receiving prenatal care from a private physician. Her past and family histories were irrelevant. Her three previous pregnancies and labors had been normal. Physical examination was negative except for the bleeding. Rectal examination did not reveal bogginess or pulsation. The laboratory report showed an essentially negative urine and a negative Wassermann. A diagnosis of ablatio placentae was made. At 10:30 a. m. the patient was given morphine sulphate gr. $\frac{1}{4}$ hypodermically. The bleeding continued, and at 11:20 a. m. slight, irregular pains began. At 2:30 p. m. a large Vorhees bag was inserted, and the bleeding stopped within half an hour. Pains became more severe in another hour and a half, and the bag was passed at 5:45 p. m. Further pains seemed ineffectual, so forceps were applied, and a 4 lb. female baby was delivered at 8:00 p. m. Examination of the baby's chest revealed an atelectasis. The baby died at 4:00 a. m. on July 10. The placenta showed a depressed area with adherent blood clots, comprising one fourth the maternal surface. The patient recovered normally, and was discharged on July 20 in good condition.

CASE 3

Mrs. V. M., white, aged 18, para 1, was admitted to the hospital at 7:25 p. m. on July 6, 1931, complaining of slight pains every four minutes. Her last menses were Nov. 17, 1931. She had received no prenatal care. The past and family histories were not obtained. The physical examination was essentially negative except for a slight edema of the ankles, and a B. P. of 180/110. Rectal examination showed two fingers dilatation, head high, cervix partially effaced, and membranes intact. At 9:30 p. m. the patient received morphine sulphate gr. $\frac{1}{4}$ hypodermically because of the severity of the labor pains, which seemed to continue after the uterine contractions had ceased. At 11:20 p. m. the patient had a convulsion. Urinalysis of specimen taken after the convulsion showed 4 plus albumin, many hyaline casts, and a few pus cells. A diagnosis of eclampsia was made. Second and third convulsions occurred at 12:20 a. m. and 2:00 a. m. on July 7. Some slight bleeding had begun at 10:00 p. m. and was continuous, with passage of clots. At the time of the third convulsion, a second hypodermic as above was administered. The uterus became more tense between pains. As the cervix was fully dilated, mid-forceps were applied, and a stillborn male baby weighing 4 lb. 9 oz. was delivered at 3:32 a. m. on July 7. The placenta showed two depressed areas which were covered by adherent blood clots, said areas comprising one-third of the total placental surface. The patient had a rather stormy convalescence, having four post partum convulsions. She was given 25 per cent glucose and 20 c.c. doses of

10 per cent magnesium sulphate intravenously. She was dismissed from the hospital in fair condition on July 20.

CASE 4

Miss H. K., white, aged 17, para 1, a waitress, was admitted to the hospital at 10:56 a. m. on Aug. 15, 1931, complaining of bleeding and quite severe pains, which had begun at 9:00 a. m. The date of her last period was doubtful, as she had bled during her pregnancy at intervals until July 4. She was four days late with her period in November, 1930. She had previously been perfectly regular. She had received no prenatal care. The membranes had ruptured four days before admission. Her past and family histories contained no pertinent information. Her physical examination gave the picture of a young white woman, approximately eight months pregnant, in the first stage of labor, with rather severe pains, some slight bleeding, and passing small clots. There was no dilatation of the cervix, which was not effaced. The laboratory report was entirely negative. At 1:10 p. m. the patient received morphine sulphate gr. $\frac{1}{4}$ hypodermically, with no relief from pain. Bleeding became fairly profuse at 4:45 p. m. and continued until delivery. Low forceps were applied at 7:35 p. m. and a 4 lb. 12 oz. baby girl was delivered at 8:00 p. m. The baby was cyanosed from birth, and died at 4:10 the following morning from atelectasis. The placenta was ironed out in one-fourth to one-third of its surface, and clots were present at this area. The mother made an uneventful recovery.

In all cases, the placenta was examined by the senior author, who delivered three of the patients. Of the cases mentioned, only two were bleeding on admission, both of whom gave a history of interval bleeding throughout the pregnancy. In Case 4, the bleeding was slight, the diagnosis being made on the history, while in Case 2 the bleeding was profuse.

Three of the four cases were primiparae. In all but Case 2, the outstanding features were the slight bleeding with clots, and the relative disproportion between the severity of the pains and the stage of the labor. There was no severe post partum hemorrhage in any case.

In presenting these cases, the authors have in mind two points: First, that the incidence of this condition seems higher than often reported. Second, it is their belief that if, during the course of an otherwise normal labor, clots are passed, no matter how little the bleeding, and if, with or without this bleeding, there is a relative disproportion between the severity of the pains and the progress of the labor, careful examination of the placenta will reveal an area of premature separation which they feel is often overlooked.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Principles in a Health Education Program

1. The goal of health education is to establish habits, attitudes, and knowledge which will contribute to the physical, mental, and emotional health.
2. Health education is based upon the needs of the group to be reached.
3. Health is not an isolated subject, but is integrated with the whole experience of living.
4. Classroom situations provide the chief basis for health activities.
5. Ideally the school supplements the home in health training, but oftentimes in practice it must assume the responsibility of educating the parent as well as the child.
6. The classroom teacher is the keystone in the arch of health training.

I have faith that some day, in whatever poignant shape, the truth will come to man that life is an art, and that in art there is no place either for violence or for sentimentality.—Havelock Ellis.

Health Facts

Statistics among Metropolitan policyholders reveal some interesting health facts:

Tuberculosis reaches a new minimum for the sixth successive year. Again the outstanding public health fact of the year was the reduction of the tuberculosis deathrate to a new low point. The drop in a single year was 8.6 per cent, the greatest year to year decrease in a decade.

The death rate for the four principal communicable diseases of childhood has dropped exactly 50 per cent in four years, and almost 70 per cent in ten. The death rate for each of these diseases, except scarlet fever, is the lowest ever recorded; and that for scarlet fever is one of the lowest.

Diabetes mortality sets new high record. The fact that diabetics live longer today

than ever before, and that the death rate has declined among persons under 45, is encouraging. However, among older people and particularly among women, the rate has increased. It is in this group that the rise has more than counter-balanced the drop in the younger age groups. The increase in the last two years has amounted to practically 25 per cent. The death rate for this disease has now risen continuously for eight years.—Statistical Bulletin, January, 1933.

"Alcohol and Man," by Katharine Biggs McKinney, while written for the laity, much of the material in the book, though presented clearly, is necessarily of a highly scientific nature. That alcohol is a depressant and not a stimulant; that modern medicine does not find whiskey valuable in the treatment of pneumonia, diabetes, tuberculosis or other serious illness; that prolonged use permanently damages the central nervous system, through the concentration of alcohol in the brain rather than in the stomach resulting in deterioration of memory, of initiative, of will power, of reasoning, are among the facts supported by medical testimony. Despite its dignified and non-partisan manner of discussing a very controversial subject, this book offers many conclusions which would seem to indicate that alcohol, at least in moderate amounts, has not done any lasting injury to the human race.

"Morale: The Mental Hygiene of Unemployment" has been prepared by George K. Pratt, M.D., to help public health nurses, relief workers, clergymen, educators and others ministering to human nature in these difficult times. How people react to deprivation and frustration; what is meant by emotional as against economic insecurity; what communities can do and are doing in meeting the mental and emotional needs of the unemployed—these and other psychological aspects of the problem are discussed in a sympathetic and practical manner.—From "Public Health Nursing," March, 1933.

LIBRARY NOTES

"A Library Is a Summons to Scholarship"

A Gift of Rare Books

To the valuable collection of rare and old books in our library there has recently been added several volumes presented by Dr. F. H. McNaught. They consist of "Some Notes on Midwifery" by Henry Marshall of Scotland, in the author's own handwriting, dated 1790; a volume bearing the date 1815, "A Popular Treatise on the Venereal Diseases" by Robert John Thornton, M.D., member of the Royal College of Physicians; a large volume dated 1698 entitled "Lazari Riverie Opera Medica Omnia," and a well-preserved book of botanical specimens from Scotland more than one hundred years old collected by the McNaught family and of great individual value. The thanks of the Society is hereby conveyed to Dr. McNaught for his generosity.

BOOK REVIEWS

Lectures on Endocrinology. By Walter Timme, M.D. Senior Attending Neurologist, Neurological Institute, New York; Professor of Clinical Neurology, Columbia University (College of Physicians and Surgeons); Past President, Association for the Study of Internal Secretions and Association for Research in Nervous and Mental Disease. With thirty-eight illustrations. Second Edition. New York: Paul B. Hoeber, Inc. 1932. 192 pages. Price \$2.50.

In this book the student, the general practitioner, and the specialist will find in a very concise and clear form the most salient features on the advances in endocrinology. The author has rewritten and revised all the material of his original volume so as to give a clear conception of his present knowledge of the endocrine glands in a small and usable book.

A chapter is devoted to each gland of the endocrine system, and he takes up the diagnostic features of hypo- and hyper-function of each gland, with suggestions as to treatment. Under each gland, pluriglandular states are discussed, which helps clarify this rather complex condition.

The subject of calcium metabolism is very clearly discussed with the parathyroid glands. Comparisons are made between normal persons and those with disturbed glandular conditions, as to their calcium utilization. Three very useful tables are given to illustrate and more clearly explain deficient calcium utilization.

The book is illustrated to demonstrate each glandular condition. Every practitioner of medi-

cine, no matter what line he follows, should carefully study this little book. He will then have a better understanding of the endocrine glands and their functions.

W. B. YEGGE, M.D.

The Wisdom of the Body. By Walter B. Cannon, M.D., Sc.D., LL.D. George Higginson, Professor of Physiology, Harvard Medical School. New York: W. W. Norton and Company, Inc., Publishers. 312 Pages.

Architects estimate the average life of their buildings to be forty years. After such a brief period they are no longer suited to the purpose of the time. Contrast these few years of usefulness with the psalmist's estimate of the life of man. "The days of a man's years are three score and ten." Of what is this long enduring edifice composed—this house not made with hands? Of brick? Of stone? Of steel? No, of none of these but of the most delicate substance imaginable—of protoplasm.

If this enigma arouses one's wonder, he will be attracted to Prof. Cannon's book, "The Wisdom of the Body." It presents in an easy, interesting way the organized responses to both internal and external environment which keep a body of the frailest structure within the narrow limits called "health." For many years Professor Cannon has engaged in investigation of swallowing, thirst, hunger, pain, and emotion. It now occurs to him that all he learned in these widely separate fields of research fits together like the parts of a jig-saw puzzle. It shows the processes by which a constantly changing body is kept apparently changeless throughout its allotted time, long though it be.

It is the business of a scientist to discover facts. It is the aim of a philosopher to bring these facts together into a great, noble, and harmonious scheme. Cannon began life as a scientist. Now, in the rich years of maturity he becomes a philosopher. Thirst, hunger, pain, and emotion assume new importance when it is observed how they keep the body within that straight and exceeding narrow path which someone ignorant of his native tongue called "normalcy."

The author discusses the nature of the blood; how its volume is kept constant and its pressure maintained; how thirst and hunger assure supplies; how salt, sugar, protein, and fat are kept in proper quantity and relation; how oxygen supply is assured and neutrality is guaranteed; how temperature is regulated and maintained in spite of external heat or cold. He calls attention to the large margin of safety in the functions of the body making ample provision for unusual demands. He shows the broad purposes of the two nervous systems, one responding to changes in external events, the other attending to internal adjustments. Lastly, the author considers the social body in an interesting chapter. He holds truly, that biological discoveries are applicable in social economy.

C. S. ELDER.

Radiologic Maxims. By Harold Swanberg, B. Sc., M.D., F.A.C.P., Editor, The Radiologic Review; Radiologist, Saint Mary's Hospital and Blessing Hospital, Quincy, Illinois; Past President, Section of Radiology Illinois State Medical Society, Secretaries' Conference Illinois State Medical Society, Illinois Radiological Society, Adams County Medical Society (Illinois), Staff of Saint Mary's Hospital of Quincy; etc. Quincy,

Illinois: Radiological Review Publishing Company, 1932. 127 pages. Price \$1.50.

As stated in the preface of this book, it is principally a compilation of the maxims that have already appeared in the Radiological Review during the past six years. The foreword by Dr. Schmitz contains very succinct and valuable information and advice for the members of the medical profession in regard to the position of radiology in the fields of cancer diagnosis and therapy.

The author has divided his material into three general classes: 1. General Radiology; 2. Roentgen Diagnosis; 3. Radiation Therapy. Under the first heading, one of his maxims is: "No department of Medicine requires a more general knowledge than does radiology." Roentgen Diagnosis is divided into the following groups: Bone Pathology, Chest, Gall Bladder, Gastro-Intestinal Tract, Genito-Urinary Tract, Obstetrics and Gynecology, and Skull. Radiation Therapy, the third main division, has four subdivisions: (a) General; (b) Roentgen Therapy; (c) Radium Therapy; and (d) Spectral Radiation other than X-Ray and Radium. At the end of each section there are quotations from well known surgeons and physicians. They are in the nature of testimonials on the value of radiology.

The maxims themselves are short, concise, and to the point, because Dr. Swanberg believes with Horace, Sophocles, and Shakespeare whose sentiments he uses to head the three main divisions, that "brevity is the soul of wit." The classification of material is well done, although it might have been carried a little farther to place maxims of definitely related ideas in sequence with one another. The book is interesting, and can be of value if ready of access as a quick reference for facts needed in a hurry. Not the least important section of the little volume is its index which contains references to both the authors and the subject matter. JOHN S. BOUSLOG.

The Colon, Rectum and Anus, by Fred W. Rankin, B.A., M.A., M.D., F.A.C.S. Division of Surgery, The Mayo Clinic. Associate Professor of Surgery The Mayo Foundation. J. Arnold Barger, B.S., M.D., M.S. in Medicine, F.A.C.P. Division of Medicine, The Mayo Clinic. Assistant Professor of Medicine, The Mayo Foundation. Louis A. Buie, B.A., M.D., F.A.C.S. Section of Proctology, The Mayo Clinic. Association Professor of Proctology, The Mayo Foundation. With 435 illustrations. W. B. Saunders Company. Philadelphia and London. 1932. 846 pages, price \$9.50.

This volume of 812 pages considers in detail all phases of our knowledge in relation to the normal and abnormal colon, rectum, and anus. It takes up the embryology, anatomy, and physiology of these organs stressing the important advances, particularly those with practical applications. It does much to controvert popular misconception, particularly in relation to the colon. It covers in detail symptomatology, diagnosis, and treatment, both medical and surgical, of the diseases of these structures. The practical aspects of proctosigmoidoscopy and roentgenography are especially well treated.

Because of the enormous field encompassed by this volume, it would be futile and inadvisable to attempt to cover in any detail the subject matter in a review of this kind. Because of its completeness, splendid bibliography, and instructive illustrations, it is excellent for reference work.

This contribution is distinctive and outstanding in that it discards many of the unimportant and

questionable facts, in regard to the colon, which fill so many of our texts. It disproves beyond any question many of the antiquated notions regarding the bowel. The work is based upon the abundant material of the colon service of the Mayo Clinic, which is probably the largest and best coordinated in the world. The entire work is intensely practical and authoritative. It should serve the profession well.

LOUIS S. FAUST.

Diagnosis and Treatment of Diseases of the Thyroid Gland. By George Crile and Associates. Contributors: Louis E. Adams, John P. Anderson, Emma M. Barr, Alexander T. Bunts, George Crile, Jr., Robert S. Dinsmore, Wallace S. Duncan, James H. Dunlap, Russell L. Haden, Charles L. Hartsock, Henry J. John, James A. Lehman, D. Roy McCullagh, Robert H. McDonald, William V. Mullin, E. W. Netherton, Bernard H. Nichols, Abbie R. Porter, U. V. Portmann, A. D. Ruedemann, John W. Shirer, John Tucker. Edited by Any F. Rowland. Illustrated. W. B. Saunders Company. Philadelphia, London. 1932. 508 pages. Price \$6.50.

The name of Crile on a book immediately stamps it as being something more than worth while and this book is no exception. This book seems to be a little different from many of Crile's works, although the theoretical and scientific aspects of diseases of the thyroid are treated in his usually thorough and minutely exhaustive manner. However, the conclusions are reached without going too far afield, and these usually dry subjects are presented in a most interesting and readable manner.

Crile still clings to the idea that he can lessen the shock by attempting to steal a goitre—perhaps Crile can do it, but the experience of many who tried it has not been as satisfactory as his, and the conclusions of most surgeons is that the place for a surgical operation is in a properly equipped operating room and that the only person fooled is the surgeon who thinks he has fooled the patient.

There is scant comfort in the book for the doctor who thinks that toxic goitre can be treated medically. He mentions the theories but maintains without hesitancy that the treatment of goitre is surgical.

The illustrations are ample and the technic of the operations are thoroughly described and the various steps of the operation are well illustrated.

The complications following thyroidectomy and their treatment are thoroughly discussed. The book is undoubtedly the best book on the subject which any doctor interested in diseases of the thyroid may obtain today.

H. R. McKEEN.

The Blind in School and Society. By Thomas D. Cutsworth, Ph.D. New York: D. Appleton and Company. 1933. Cloth. 283 pages.

This is "A Psychological Study." But those who have studied and combatted the causes of blindness should know more about its psychology. The first chapter, upon The Preschool Blind Child, 23 pages, throws a new light on the effects of congenital blindness and the relations of sight to the child's early development. With the key here furnished, it is easy to understand the mental, emotional, educational, and social peculiarities and incongruities of the blind. The enormous importance of the education of touch, to those who lack sight, is generally unknown to parents and should be better understood by all physicians.

The visual implications of words, of which the blind have no experience, give importance to the chapter on "Verbalism." Chapters on emotional life, sex behavior, and esthetic life of the blind, are a revelation of the world in which the blind live. "Personality problems in institutions for the blind" is a chapter that gives interpretations that are needed by those who have given years to the management and guidance of the blind in such institutions. The obstacles which they have to contend with are well pointed out in this chapter.

The book is well printed in good sized type that makes it available to persons with poor sight. There is a good index and a glossary of terms unfamiliar to those who have not studied psychology. There is a very suggestive appendix of "problems for further study" and another giving a good bibliography of works for reference. This book will open a new field of thought to physicians, teachers, and humanitarians interested in the welfare of the blind. The author's special fitness for the writing of this book is evident when we know that he became blind when eleven years old and continued his studies through the university, taking a Master's Degree in Social Sciences.

EDWARD JACKSON.

The Pelvis in Obstetrics. A practical manual of Pelvimetry and cephalometry, including chapters on roentgenological measurement. By Julius Jarcho, M.D., F.A.C.S. Consulting Gynecologist, Hastings Hillside Hospital; Attending Obstetrician and Gynecologist, Sydenham Hospital. 140 illustrations, 51 tables. New York: Paul B. Hoeber, Inc. 1933. 365 pages. Price \$6.00.

This book presents, in a rather statistical style, the subject of pelvic measurements. There is an interesting chapter dealing with the history of pelvimetry, and with the various instruments invented from time to time for that purpose.

The chapter dealing with the actual modus operandi of pelvimetry is clearly written, and well illustrated with excellent drawings. The chapters on roentgen-ray pelvimetry and cephalometry are interesting and instructive. Whether or not this complicated procedure offers sufficiently more over plain stereoscopic plates to justify its use, except in the very exceptional case, is a question.

An exhaustive bibliography from foreign and domestic sources is appended.

The chief adverse criticism is the large amount of space given to tables and paragraphs of a statistical nature, of pelvic measurements both normal and abnormal from hospitals and clinics throughout the world, which material is likely to be of more interest to the statistician than to the clinical obstetrician. Also the author has indiscriminately used the English and metric systems of mensuration, especially in the numerous references and quotations from the early authors, so that for the American reader, trained in the metric system, concepts of measurements and differences therein are difficult to form as he reads.

On the whole, it is the reviewer's opinion that this volume offers little which cannot be obtained from the standard text-books of obstetrics, and perhaps better in the latter, due to a more complete correlation of pelvimetry with its anatomical and pathological bases, and a closer practical clinical application.

LYMAN W. MASON.

Tumors of Bone. By Charles F. Geschickter, M.D., Surgical Pathological Laboratory, Department of Surgery, Johns Hopkins Hospital and University, Baltimore, and Murray M. Copeland, M.D., Memorial Hospital, New York City. With forewords by Dean Lewis, M.D., Professor of Surgery, Johns Hopkins Hospital and University, and Joseph Colt Bloodgood, M.D., Clinical Professor of Surgery, Johns Hopkins Hospital and University, Baltimore. The American Journal of Cancer, 654 Madison Avenue, New York City. 1931. 709 pages.

This is beyond all doubt the most informative volume on bone tumors that has ever been written. The authors have correlated the clinical, radiological, and surgical features with the histological picture. This is the reason the book is outstanding and should be studied by every one who has, or ever expects to have, a case of bone tumor in his practice.

Every radiologist or surgeon who attempts to diagnose bone lesions—benign, malignant, primary, or metastatic—should have framed on the wall of his study the chart (Figure 378) giving the roentgenographic diagnosis for diseases and tumors of bone. This chart alone is well worth the price of the volume and gives in the most concise manner possible the differential diagnosis of bone tumors and diseases.

I have two criticisms on this work: First, the reproduction of photomicrographs and roentgenographic plates is, on the whole, rather poor. It, however, must be understood that these illustrations are taken from material many years old. Second, the authors have in several instances originated a descriptive terminology of their own not conforming to the pathological terms generally used over the country. This fact makes the volume less easily understood by the average physician-reader.

SANFORD WITHERS.

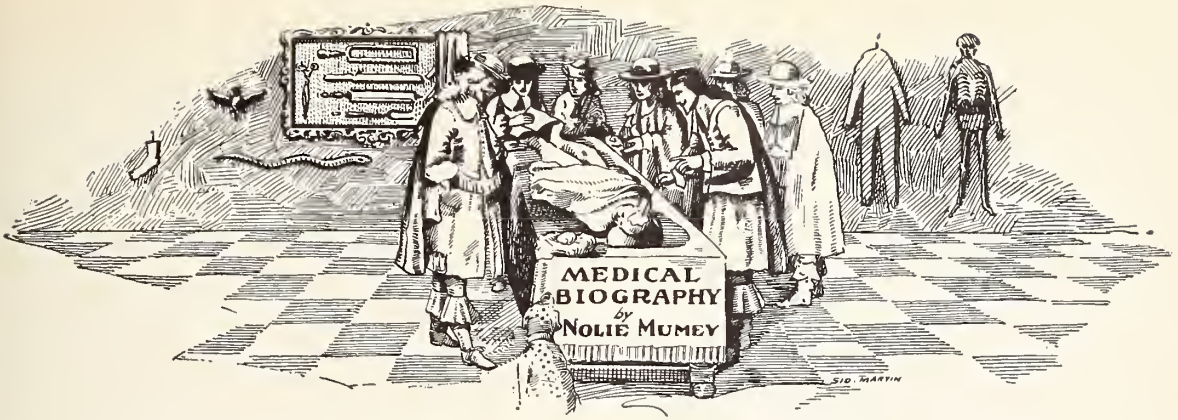
Intern's Handbook. A guide to rational drug therapy, clinical procedures, and diets. By members of the faculty of the College of Medicine, Syracuse University. Under the direction of M. S. Dooley, A.B., M.D., Chairman, Publication Committee. Philadelphia and London: J. B. Lippincott Company. 254 pages, price \$3.00.

This small book is a very complete and practical guide for carrying out the common procedures which the intern is called upon to do in all the different specialties. Other chapters include a drug list, serums and vaccines, and treatment of poisoning. No doubt such a handy reference work is of considerable value for emergencies and for the inexperienced intern, but certainly should not in any manner supplant the invaluable advice, supervision, and discussion which should be eagerly sought from the staff physician and the resident. Should such a book tend to keep the intern away from his text books and periodicals, it would do more harm than good. After all, the manner in which most difficulty with interns arises is not in their lack of knowledge, but in their unwillingness to work and to cooperate.

The book is a little too bulky to appear neat in an intern's pocket. It would be better, therefore, to have several copies placed in the intern's quarters and other logical places in the hospital.

RALPH W. DANIELSON.

(Continued on Page Fourteen, Advertising Section)



SILAS WEIR MITCHELL

(Continued from May Issue)

Dr. Mitchell's literary interest continued throughout his lifetime; today he ranks among the great outstanding American novelists of the nineteenth century. His fondness for history and traditions influenced him to write historical novels, such as "Hugh Wynne," the best known of his books. It deals with Colonial life in Philadelphia during the Revolution. The Quakers held a meeting in 1897 and objected to the book and the author because the Quaker in the story appeared in such a way as to wrong them. They brought out a review of the novel in "Friends' Intelligencer" of Philadelphia, later publishing a small pamphlet to correct some of Dr. Mitchell's descriptions of the manners and customs of the "Friends" at the time of the Revolution.

Some biographers have stated that Dr. Mitchell did not write fiction until he was fifty years of age. However, two books for children, "The Children's Hour," 1866, and "The Wonderful Story of Fuz-Buz the Fly and Mother Grabem the Spider," 1867, were written twelve and thirteen years earlier. "The Children's Hour," written by E. W. S. and S. W. M., has this verse on the title page:

"Between the hour and the daylight,

When the night is beginning to lower,
Comes a pause in the day's occupation,

That is known as the Children's Hour."

The small volume contains the following short stories: "The Curly Fish," "The Wolf That Wanted a Doctor," "Old Wine in a New Bottle," "Real Magic," "The Tale of the Great Giant, Smokey Pokey," The following poems are also included in

the book: "Bun the Squirrel," "The Bird and the Field Mouse," "Little Bobby Redbreast," "Tomorrow'll Be Christmas," "Naughty Harry," "Harry's Birthday," "Careless Sophia," "Tommy's Trials," "Little Mabel." This book portrays Dr. Mitchell's interest and study in the natural sciences. Outside of these two books he did very little literary work until 1880, when a volume appeared containing three stories: "Hephzibah Guinness," "Thee and You," and "A Draft on the Bank of Spain." From this time numerous novels and volumes of poems appeared regularly until his death. His first novel, "In War Time," appeared in 1885; his last novel, "Westways," written in his eighty-fourth year, was published in 1913. In his latter years the summer months were devoted to writing as a diversion from medical work.

Dr. Mitchell's literary style showed he understood clearly the things he was writing about. His insight and comprehension of human nature combined with his descriptive power were among the things that made him a great novelist. He had the gift and versatility of writing not only the simple fairy story, "Fuz-Buz," but also the psychological tragedy, "The Adventure of Francois," as well as one of the greatest American historical novels, "Hugh Wynne."

Many of his stories are drawn from medical experiences, some of them portraying incidents in such a vivid manner that they were often spoken of by contemporary reviewers as "medicated novels." In many of his stories the characters are so vividly portrayed that they seem to resemble people in real life.

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

Tell Us If You Are Going to Milwaukee

INDICATIONS are that the combination of attractions in connection with the June 12-June 16 annual session of the American Medical Association at Milwaukee will result in an exceptional attendance of Colorado physicians.

Reservations already in hand seem to assure the operation of a special Pullman from Denver, leaving at 4:30 p. m. Saturday, June 10, on the Burlington Aristocrat. But there is still room for more on the car, and if we "run over" we can arrange easily for two cars.

For many reasons besides the operation of the special car, the Executive Office of the Society would appreciate hearing from every member planning to attend the A. M. A. meeting. Let the central office know of your transportation plans and requirements, particularly if we can be of any service in helping make your arrangements.

Railroad rates are very attractive. The lowest rates are obtained by buying 16-day round trip tickets to Chicago and separate round-trip tickets from there to Milwaukee, because of the low rates established for the Chicago World's Fair. There is even a fare-and-a-half rate this year for round-trip Pullman tickets. Here is the railroad fare set-up which will apply from Denver on 16-day tickets, and which will be used for those on the special Pullman: Round-trip railroad, Denver to Chicago, \$41.05; round-trip lower-berth Pullman, Denver to Chicago, \$16.35; round-trip railroad, Chicago to Milwaukee, \$4.08; round-trip parlor car seat fare, Chicago to Milwaukee, \$1.50; grand total: \$62.98. These rates apply not only from Denver, but also from Colorado Springs and Pueblo, and are only slightly higher from Western Slope points.

Innovations for Our State Meeting

OFFICERS and Committees in charge of arrangements for the Sixty-third Annual Session at Colorado Springs have determined upon a few changes in the usual schedule of events destined, they hope, to make the meeting more attractive than ever.

A frequent objection has been heard in the past to the system whereby members of the House of Delegates must leave their homes a day earlier than the average member of the Society, in order

to take part in the opening business meeting of the House held the evening preceding the main convention. The usual plan of each meeting leaves a half-day free for entertainment, golf, etc., sometimes in the three-day session. A dovetailing of these events has therefore been worked out for the September session. The resulting schedule gives more time to the meetings of the House of Delegates than heretofore, allows the same time for scientific programs, golf, and entertainment, yet holds the entire meeting within three days: Thursday, Friday, and Saturday, September 14, 15, and 16, 1933.

The following condensed schedule is present below, in advance of definite program announcements, so that delegates in particular may familiarize themselves with the plan which will save them from a half to a full day of time away from their homes.

Physical arrangements of the session will largely duplicate those of the 1931 meeting, which proved to be the largest ever held by the Society. All scientific meetings, meetings of the House of Delegates, and all scientific and commercial exhibits, will be in the Colorado Springs municipal auditorium. Headquarters offices, committee rooms, and official luncheons will be in the Antlers Hotel. The annual reception, banquet, and dance will be at the Broadmoor Hotel.

The tentative condensed schedule follows:

Thursday, September 14

Morning: First meeting of House of Delegates and first flight of golf tournament (for all except members of the House of Delegates).

Afternoon: Scientific program and second flight of golf tournament (for members of the House of Delegates).

Evening: Second meeting of House of Delegates.

Friday, September 15

Morning: Scientific Program.

Noon: Official luncheons.

Afternoon: Scientific program.

Evening: Presidential reception, annual banquet, dancing.

Saturday, September 16

Morning: 9:00 to 11:00, Scientific program; 11:00 to 12:30, third and final meeting of House of Delegates.

Afternoon: Scientific program.

Evening: Entertainment.

MEDICAL SOCIETIES

COLORADO OPHTHALMOLOGICAL SOCIETY

March 18, 1933

DR. M. JEAN GALE, PRESIDING

Drs. D. H. O'Rourke and L. L. Davis presented a case of bilateral glaucoma in which an iridencleisis operation had given very satisfactory immediate lowering of tension. Dr. Wm. C. Finnoff presented a young woman with retrobulbar neuritis apparently due to apical abscesses on several teeth. Dr. Wm. H. Crisp again presented a fifty year old lady with an elevation in the macula, the differential diagnosis being between neoplasm and an exudate. Dr. J. M. Shields presented a thirty-seven year old nurse whose fundus showed many peculiar pittings in the macula and elsewhere, simulating hole in the macula. Drs. Edna Reynolds and Maurice Marcove presented a young man who had had a spontaneous absorption of a traumatic (contusion) cataract. Dr. George Stine reported a case of tear gas burn of the face and eyes. Dr. F. R. Spencer reported a case of corneal injury from an explosion.

* * *

BOULDER COUNTY

The Boulder County Medical Society held its regular monthly meeting, Thursday, May 11, at the Boulderado Hotel, Boulder.

The scientific program for this meeting was furnished by members of the Denver County Medical Society. Dr. John M. Foster, Jr., read a paper on "Carcinoma of the Lower Lip," Dr. Duval Prey a paper on "Gunshot Wounds of the Abdomen," and Dr. Wilfred S. Dennis a paper on "Duodenal Lesions Other Than Ulcer." The papers were illustrated with lantern slides and were followed by a general discussion.

Dinner preceded the scientific program.

MARGARET L. JOHNSON,
Secretary.

* * *

CROWLEY COUNTY

The Crowley County Medical Society held its regular meeting May 12 in Ordway.

The scientific program was furnished by Drs. H. T. Low and J. S. Norman of Pueblo. Dr. Low presented a moving picture of "Transurethral Resection of the Prostate," and Dr. Norman illustrated the "Modern Methods of Treating Tuberculosis following Bone Injuries."

Dr. J. A. Hipp presented a case of "Broken Ulna and a Dislocated Radius at the Elbow Joint." Dr. Norman discussed the seriousness of such injuries and their management.

The June meeting of the Crowley County Medical Society will be held at the home of Dr. W. M. Desmond at Ordway, June 14, 7:30 p. m. The program for this meeting will be furnished by Dr. J. E. Jeffery and Dr. E. O. McCleary.

J. A. HIPPI,
Secretary.

* * *

DENVER COUNTY

There were one hundred and sixty-three members present at the first May meeting of the Medical Society of the City and County of Denver, held in the Auditorium of the Capitol Life Insurance Company Building, May 2.

Dr. Kenneth C. Sawyer was elected to membership.

Dr. George L. Monson, Chairman of the Com-

mittee on Relations with Denver General Hospital, read a preliminary report of the Committee, which was discussed by Dr. George Miel and Dr. H. S. Finney.

Dr. C. F. Kemper reported for the Committee on Medical Economics, and made a plea for all members of the Society to become familiarized with medical economics problems by reading and conferences with other members.

Dr. Roy P. Forbes reported for the Committee on Relations with Public Schools combined with the Committee on Relations with the Department of Health. In this report Dr. Forbes set forth ten specific recommendations as follows:

1. Smallpox vaccination for all new-born babies occupying free beds at Denver General and Colorado General Hospitals.

2. Immunization of all babies admitted to welfare stations. This immunization would be done by the attending pediatrician and would include smallpox (if not previously given) and toxoid.

3. Free immunization of school children by the Health Department of the City or by the School Health Department in such schools as are located in the poorer districts. In the better districts, immunization might be provided to such poor families as are certified by a school nurse.

4. Literature on diphtheria and smallpox immunization would be edited under the joint auspices of the Denver City Health Department, the School Health Department and the Denver County Medical Society.

5. Such literature would be used freely in the event of a case of diphtheria or smallpox appearing in one of the public schools.

6. School examination reports which are returned to the parents should indicate the need of immunization if such has not been accomplished. The parents should be urged to consult the family physician for this purpose and given a form for him to fill out when he has immunized the child.

7. Emphasis should be placed on the immunization of the pre-school child and literature used freely among P. T. A's. and the P. T. A. pre-school clinics. The parents should be given the same form used in the public schools and instructed to consult the family physician who will immunize the child and fill in the form.

8. The County Society should sponsor a campaign of education among physicians preparing them for the immunization of babies and children. This campaign should also be directed at special groups and should include a demonstration of technic in giving toxoid, the Schick test and smallpox vaccination.

9. An average fee of \$5.00 for diphtheria immunization, including the Schick test, if done at the doctor's office.

10. An average fee of \$2.00 for smallpox vaccination, if done at the doctor's office.

This report was discussed by Drs. Jaffa, Beagler, Schoonover, and Monsen. The report was adopted.

Dr. R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association, gave a half-hour informal discussion of Medical Economics problems.

There was general discussion of the Compensation Bill, House Bill 557, and by a vote of 97 to 7 the County Society voted to oppose the bill.

The second regular May meeting was held May 16 at the Auditorium of the Capitol Life Building. This was the last meeting before the summer holidays.

The scientific program for this meeting was presented by members of the Osler Society.

Dr. C. W. Anderson presented a paper on "Natural Contraception." This paper was discussed by Drs. T. M. Burns, Cuthbert Powell, Peterson and Gottesfeld.

Dr. W. S. Dennis read a paper on "Tumors of the Heart," which was discussed by Dr. Sanford Withers.

Dr. Jack Hutton presented a case of "Lympho-granuloma Inguinale," which was discussed by Dr. John Ambler.

Eighty-four members of the Society were present at this meeting.

O. S. PHILPOTT,
Secretary.

* * *

EL PASO COUNTY

Dr. H. T. Low of Pueblo and Dr. George Shivers of Colorado Springs presented the scientific program at the regular May meeting of the El Paso County Medical Society, held at the Day Nursery, Wednesday, May 10.

Dr. Low read a paper on "Transurethral Prostatic Resection" and Dr. Shivers presented a paper on "Chordoma." Both papers were illustrated with lantern slides.

CARL S. GYDESEN,
Secretary.

* * *

FREMONT COUNTY

Dr. Maurice H. Rees, Dean of the University of Colorado Medical School and Hospitals, was the guest speaker at the regular meeting of the Fremont County Medical Society held April 24 in the Municipal Building at Canon City. Dr. Rees spoke on "Expenses of Medical Care" and illustrated his talk with lantern slides.

The Fremont County Medical Society held its regular monthly meeting May 22 at Florence. Dr. V. A. Hutton of Florence read a paper on "Coronary Occlusion." The paper was discussed by members of the Society.

A new constitution and by-laws and fee bill were adopted by the Society at this meeting.

A. BEE,
Secretary.

* * *

LARIMER COUNTY

Dr. Glen E. Cheley of Denver was the guest speaker at the regular meeting of the Larimer County Medical Society held Wednesday, May 3, at Turner's Inn. Dr. Cheley delivered an address on "Embryology and Surgery of Clefts of the Lip and Palate."

The scientific meeting was preceded by a dinner.

DUANE F. HARTSHORN,
Secretary.

* * *

PUEBLO COUNTY

The first May meeting of the Pueblo County Medical Society was held Tuesday, May 2, at the Hotel Congress. Dr. Leonard J. Walsh was the principal speaker and talked on "Problems in Orthodontia."

The second May meeting was held Tuesday, May 16, at the Hotel Congress. Dr. R. S. Johnston of La Junta was the guest speaker and gave a talk on "Embolism."

Dr. G. W. Hawley of Bridgeport, Conn., was the guest speaker at the special meeting, held May 23, at the Hotel Congress. Dr. Hawley gave an illustrated lecture on the "New Methods of Treating Fractures."

J. L. ROSENBLOOM,
Secretary.

Obituary

Carbon Gillaspie

Dr. Carbon Gillaspie, born in Sunshine, Colorado, July 27, 1879, son of Mr. and Mrs. John W. Gillaspie, died suddenly at his Boulder home, May 5, 1933. He received his preparatory education in Colorado, and his degree of M.D. from the University of Colorado School of Medicine in 1905. On July 3, 1906, he married Grace Fairchild of Mexico, Missouri.

Dr. Gillaspie engaged in the practice of his profession at Nederland from 1905 to 1909, when he moved to Boulder, where he resided to the time of his death. He was associate professor of anatomy at the University of Colorado School of Medicine, a member of the American College of Surgeons, the American Association of Anatomists, a Fellow of the American Medical Association, and a member of the Colorado State Medical Society since 1905.

Dr. Gillaspie was active in civic affairs both in Nederland and Boulder. While practicing in Nederland he served as mayor. In Boulder he was a member of the city council for six years, a member of the board of education for six years and a director of the Chamber of Commerce. He was a member of the American Legion and the Reserve Officers Corps and physician for the Veterans Bureau.

Dr. Gillaspie is survived by his widow and one son, Dr. John D. Gillaspie, to whom the Colorado State Medical Society extend their sincere sympathy.

WOMAN'S AUXILIARY

EL PASO

El Paso County Auxiliary to the County Medical Society has elected new officers and will immediately make plans for the coming fall meeting of the State Society.

The following officers were elected:

President, Mrs. G. B. Webb; first vice president, Mrs. E. L. Timmons; second vice president, Mrs. Clifford Goodson; secretary, Mrs. George Stine; treasurer and social secretary, Mrs. C. S. Morrison; corresponding secretary, Mrs. E. B. Liddle.

The newly elected officers are planning a dinner dance in the very near future—this dinner dance to include the doctors and their families and the bachelor members of the County Society.

The fiscal year closes with election of officers being held throughout the state. These will be published as soon as the reports are in and complete.

PUEBLO

The annual meeting of Pueblo County Medical Auxiliary was a luncheon meeting held May first. Tables and room decorations were in spring flowers with candles of pastel shades. A musical program was given by the children of the members and closed with a vocal solo by one of the members. The president, Mrs. W. S. Johnston, called a short business meeting which included officers'

reports and reports of all committees showing the amount of work accomplished by this young organization. Election of officers was then held, with the following results: Mrs. J. J. Pattee, president; Mrs. J. J. McDonnell, vice president; Mrs. R. E. Davis, corresponding secretary; Mrs. J. T. Rosenblum, recording secretary; Mrs. E. H. Steinhardt, treasurer; Mrs. H. T. Low, auditor; Mrs. J. J. Pattee and Mrs. R. C. Robe, delegates to the state meeting, with Mrs. C. W. Maynard and Mrs. F. J. Peirce as alternates. With this excellent selection of officers, Pueblo should have a most successful year next year.

DENVER

Denver County Auxiliary held its last regular meeting of the year at the nurses' home of the Denver General Hospital on Monday, May 15. After the annual business of reports, the following officers were elected: Mrs. John McCaw, president; Mrs. Claude Cooper, first vice president; Mrs. Arnold Minnig, second vice president; Mrs. Clyde Cooper, secretary; Mrs. Virgil Sells, treasurer; Mrs. T. Mitchell Burns, parliamentarian, and Mrs. John G. Ryan, auditor. The program consisted of musical selections by Miss Jane Reyer, cellist, accompanied by Hazel Whait-Reyer. The speaker of the day was Dr. Amos L. Beaghler, who spoke concerning some of the legitimate health activities of the Auxiliary. Because of the excellent suggestions given by Dr. Beaghler, every effort will be made to publish his complete talk in the next news of the Auxiliary in the July number of Colorado Medicine. Mrs. H. R. McKeen, retiring president, introduced Mrs. McCaw, incoming president, who gave words of greeting and hope for the Auxiliary next year.

Besides news of elections, an interesting item was received from Mrs. P. J. McHugh, press chairman of Larimer county, saying that the wives of the physicians of Erie, Fort Collins, Johnstown, Berthoud, Loveland, Estes Park, and Louisville were entertained by the wives of the Longmont physicians Friday, May 5, at luncheon and a social afternoon with music and reading at the home of Mrs. J. A. Matlock.

Our thoughts now turn to the state meeting, which is to be held in Colorado Springs this fall. The activities of the Auxiliaries have grown in the past few years and more and more are we looking forward to seeing old friends and making new ones at these annual meetings. The program will appear at a later date in these columns.

COLORADO NEWS NOTES

COLORADO SPRINGS—Dr. Gerald B. Webb and Dr. John A. Sevier attended the meeting of the American Congress of Physicians and Surgeons at Washington.

COLORADO SPRINGS—Dr. M. O. Shivers attended the annual meeting of the American Association for the Study of Goiter at Memphis, Tenn., May 15, 16, 17.

COLORADO SPRINGS—Dr. D. A. Vanderhoof was elected president of the Colorado Otolaryngological Society at its annual meeting held in Denver, May 6, 1933.

DENVER—Dr. George B. Kent of Denver attended the annual meeting of the American Association

for the Study of Goiter at Memphis, Tenn., May 15, 16, 17.

FLOWLER—Dr. G. E. Van Der Schouw has returned after a vacation spent in Florida.

AMERICAN PUBLIC HEALTH ASSOCIATION Sixty-Second Annual Meeting

The American Public Health Association, foremost sanitary organization in the United States, announces its Sixty-second Annual Meeting, to be held in Indianapolis, Indiana, October 9-12, 1933.

It was in Indianapolis in 1900 at the Twenty-ninth convention of the American Public Health Association that Dr. Walter Reed read a paper entitled "The Etiology of Yellow Fever—A Preliminary Note" indicating that the mosquito serves as the intermediate host for the parasite of yellow fever. History was being made in the Old German House that day, yet it is reported by some of those present that the epochal report was received with only mild interest.

At the Sixty-second Annual Meeting it is planned to honor the only living participant in the famous Yellow Fever experiment, Dr. John Kissinger, at a special memorial session.

The scientific program will discuss every aspect of modern public health practice, from the viewpoint of the health officer, the laboratory worker, the epidemiologist, the child hygienist, the industrial hygienist, the nurse, the vital statistician, the health educator, the food and nutrition expert, the sanitary engineer. Distinguished scientific pronouncements may be expected from the outstanding personalities in the public health profession who will contribute to the program.

The American Public Health Association, 450 Seventh Avenue, New York City, will be glad to send more complete information about its Indianapolis annual meeting, to anyone interested.

THE AMERICAN COLLEGE OF PHYSICIANS Chicago, 1934

The American College of Physicians will hold its Eighteenth Annual Clinical Session in Chicago, with headquarters at the Palmer House, April 16-20, 1934.

Announcement of these dates is made particularly with a view not only of apprising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging their 1934 meetings.

Dr. George Morris Piersol, of Philadelphia, is President of the American College of Physicians, and will arrange the program of general sessions. Dr. James B. Herrick, emeritus professor of medicine of Rush Medical College, Chicago, has been appointed general chairman of local arrangements and will be in charge of the program of clinics. Mr. E. R. Loveland, executive secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general and business arrangements, and may be addressed concerning any feature of the forthcoming session.

NATIONAL HEALTH FOUNDATION

Dr. William Muhlberg of Cincinnati, past president of the American Association of Life Medical Directors, has been made a member of the Board of Trustees of the National Health Foundation. The National Health Foundation is an institution chartered under an Act of Congress in the District of Columbia. Its purpose is primarily one of popular education pertaining to the health of mankind.

WYOMING SECTION

President, F. L. Beck, Cheyenne

Vice President, J. L. Wicks, Evanston

Secretary, Earl Whedon, Sheridan

President-elect, H. L. Harvey, Casper

Treasurer, Evald Olson, Meeteetse

Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne

Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas

Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

Yellowstone Park Meeting Postponed

OWING to the withdrawal of the Idaho State Medical Society from the joint meeting, officers of the Wyoming State Medical Society have decided to postpone the Yellowstone Park meeting until some other year.

Dr. H. W. Stone, Secretary-Treasurer of the Idaho State Medical Society, under date of April 19, wrote:

"I regret to inform you that the councillors of the Idaho State Medical Association have decided that it will be impossible for our Society to meet with Wyoming in our proposed meeting at Yellowstone Park in August this year. The Councillors felt that due to financial conditions it would not be advisable to hold the meeting in a location which is so far removed from such a large number of our Idaho doctors. The doctors from the north end of the state would be required to take a drive of from two to four days in order to get there.

"I hope that conditions will be such another year that we can meet with you in Yellowstone, and that this will be a postponement of our meeting rather than an end of it. I hope also that this decision will not inconvenience you."

It would be most selfish and unfair for Wyoming alone to hold the Yellowstone Park meeting. We must realize the truth of the argument put forth by the Idaho State Medical Association, and agree in postponing to a future year our joint meeting. The Utah State Society decided last year to postpone the Yellowstone Park meeting. Surely Wyoming can only agree to the postponement.

It is a great disappointment to all the medical men of Idaho, Utah, and Wyoming to give up the joint meeting this year, but

it only means a postponement—never an abandonment of the idea. Memories of the past will never fade and our hopes are only intensified for a wonderful meeting there in a year or two. Such great meetings can never die, but shall grow better and better as years roll on.

It is now up to the Wyoming Medical Society to decide where and when it wishes to meet this year. We have just received an invitation from the Cody doctors and the Cody Club for the Society to meet this year in Cody. They showed us a good time when we met there in 1924. The last two meetings have been held on the Union Pacific in the southern part of Wyoming, and it would be fair to hold this year's meeting in either the central or northern part of the state.

The Sheridan County Medical Society would be pleased to entertain the State Society some time in either August or September. It is true that Sheridan was favored in 1930, but Sheridan would be pleased to have the State Society again this year if it is desired. Meeting places for the past few years have been as follows: 1922, Sheridan; 1923, Laramie; 1924, Cody; 1925, Buffalo; 1926, Lander; 1927, Cheyenne; 1928, Yellowstone Park; 1929, Casper; 1930, Sheridan; 1931, Rawlins, 1932, Rock Springs. Your President, Dr. F. L. Beck, is putting it up to the membership to decide in an article in this issue. If a state meeting is decided upon it will have to be held late in the summer, as it will not be possible to arrange a fine program for the dates selected for the Yellowstone Park meeting.

If it is to be a Wyoming meeting this year

it is up to the Wyoming doctors to make the program by presenting not two or three papers, but many of them. We hold that our own men are on a par with the medical men of any state in the Union. They can deliver the goods if they want such a meeting. It is up to the membership to decide; so write our President, Dr. F. L. Beck, at Cheyenne, your ideas on the subject at once.

E. W.

*Do You, or Do You Not,
Want a State Society
Meeting This Year?*

MEMBERS of Wyoming State Medical Society:

At the Rock Springs meeting last year it was fully understood that the much-talked-of Tri-State session at Yellowstone Park would be carried out without a hitch. Through no fault of your officers, and with no criticism of the action of the Montana Society, the officers of that state found they could not meet beyond the state boundary lines. Recently the councillors of the Idaho Society decided that they cannot ask their men to make the long trip from northwest Idaho to the park and hence feel that in this time of depression they are justified in withdrawing from the Park meeting plan.

Your secretary has endeavored to get the sentiment of the county secretaries as to (1) going ahead on our own with a Park meeting; (2) holding a two-day session at some other point with the idea of having a union meeting in the Park in a year or two when financial conditions are improved; (3) abandoning the idea of holding any meeting this year, as it is reported some states are doing.

Objections to holding a Park meeting are the large expense to which the Society would be obligated and the improbability of leading men from the East and West being willing to travel long distances to appear before a small group instead of the large gathering we had expected to have. Objections to the second plan exist in the general lethargic condition in which we all find ourselves, and the very real desire in many not to lose any opportunity to make a dollar

nor to expend any funds except for necessities.

Objections to abandoning the holding of a session this year are that the House of Delegates should meet for the transaction of business and the election of officers and that we all need to get together for acquaintance' sake and the renewal of old friendships, to say nothing of the inspiration to better work, the new ideas acquired or the confirmation of the value of our own methods that come from meeting our fellows in conferences, discussions, and clinics.

While the disruption of our plans at this late date is a very serious blow, your officers are loath to believe that it would be impossible to carry on and have a splendid meeting at a later date, say September or October. However, replies received to date would indicate that a majority prefer to wait until next year and then have a big Park meeting even if we go it alone. But we wish the opinion of every member of the Society.

What is your thought in the matter, brother? Reach for the fountain pen and a three-cent stamp or a postal card and let us know at once, addressing F. L. Beck, President, Wyoming State Medical Society, 408 Hynds Building, Cheyenne, Wyo.

Obituary

Albert E. Brownrigg

Dr. Albert E. Brownrigg, Manager, Veterans Administration Faculty, Sheridan, Wyoming, since September 1, 1932, died at his home in Nashua, New Hampshire, Wednesday, May 3, 1933. Funeral services will be held in the Main Street Methodist Church of that city at 2:00 p. m. Saturday, May 6, 1933.

He was born in Pictou, Nova Scotia, Canada, September 28, 1872. After completing his preliminary college education, he entered the Baltimore Medical College, now the University of Maryland, and was graduated in 1897. This was followed by special graduate work at the Harvard Medical College, for which he received a "cum laude" degree as Doctor of Medicine. Being interested in the treatment of nervous and mental diseases, shortly following his medical college work he became a member of the staff at the New Hampshire State Hospital, and early in his career became prominent in medical circles. We who worked with him recognized his ability not only as a psychiatrist and executive officer in hospital work, but also that he was exceptional-

ly well informed in general medicine and surgery.

During Dr. Brownrigg's stay in Sheridan, he made several talks before various organizations, some of which he was a member, and contributed freely to local activities.

Prior to March 8, he appeared to be in quite vigorous health, although there was some history later obtained of symptoms which may have referred to early developments of his fatal illness. On the evening of this date, Dr. Brownrigg called one of our staff, at which time the first definite symptoms of his last illness was observed. Although he continued performing his usual duties, he did not improve to any great extent. During the night of April 8 his condition became very serious and remained so without improvement, and he was unable to return to duty. Dr. Brownrigg, throughout his illness while he remained at this station, continued in his usual good spirits, cordial and appreciative to everyone for favors shown him or assistance rendered during his illness. Prior to leaving Sheridan he full realized the seriousness of his condition and at his own request, after conferring with one of our consulting staff, arrangements were made for his return to his home at Nashua, New Hampshire. Upon departure from Sheridan, many of his friends were at the station. His condition was such that he could not greet each of them personally, but when leaving the station he asked that the drawing room window be raised and reciprocated their farewell greetings by waving to them and further extended his best wishes through those who had an opportunity to speak with him in the drawing room. Enroute to his home he was met by friends, one of them Dr. Harry R. Carson, formerly in charge of this station, who advised that he was given every assistance possible in transfer at Chicago.

To Mrs. Brownrigg and relatives, in behalf of the personnel at Fort Mackenzie and his friends in Sheridan, we wish to extend our sympathy in their bereavement in the loss of Dr. Brownrigg, our distinguished citizen.

THOS. G. McLIN.

WYOMING NEWS NOTES

SHERIDAN COUNTY

The Sheridan County Medical Society held a special meeting at the home of Dr. and Mrs. E. G. Dennison, Tuesday, April 25.

This meeting was arranged as a special scientific meeting. It was felt that sufficient time for discussion of papers presented was not allowed following the regular monthly meetings of the staff of the Sheridan County Memorial Hospital held the second Tuesday of each month. It had been voted two weeks before to hold meetings of the Sheridan County Medical Society on the fourth Tuesday of each month as strictly scientific meetings.

Nearly all the members of the Society attended this meeting and the following program was enjoyed by those present:

"Coronary Occlusion," by Dr. L. C. Meredith; "Therapeutics of the Intravenous Drip," by Dr. J. E. Carr. Discussion which followed each paper greatly added to the program.

Following the program delightful refreshments were served by the hostess.

A Health Department

A health department, whether federal, state, or local, is an agency of government created by the people for mutual protection against a host of common enemies—enemies just as real and much more destructive in a given period of time than would be the enemy of an invading country.

Its activity is directed to the prevention and control of disease and to the promotion of higher standards of health rather than to the treatment and cure of disease. It deals with cause rather than effect, for a case of disease is the effect of a preceding cause. It is the organized effort of society to control cause and prevent effect just as truly as the system of jurisprudence is society's effort to control crime and protect civil rights. That the causes with which it is concerned are less obvious to the eye than the causes of crime, does not mean they are less real but only that they are the more insidious, treacherous, and dangerous. The child strangling with diphtheria is attacked by an enemy as real as the child throttled by a criminal.

Fundamentally the purposes of preventive medicine, as carried out by the health department, are to postpone the event of death, to make life more livable by the control of preventable sickness, and to promote human happiness by the prevention of human suffering.—Dr. E. L. Bishop, Commissioner of Health, State of Tennessee.

Vera Cruz Goes Modern

News comes from Vera Cruz that they have legalized birth control in the sterilization of criminals and mental defectives. They are going to prevent the marriage of persons who are mentally defective. This new law is the result of the efforts of Dr. Salvador Mendoza. The law will be enforced under the State Bureau of Eugenics and Mental Hygiene. Sex education is to be made obligatory, and the treatment of social diseases and evils is also made obligatory in Vera Cruz.

Take this Journal home to your wife.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Vol. VI

June, 1933

No. 6

TUBERCULOSIS in the American Negro with its high mortality rate is an urgent problem. The literature dealing with this subject has much to say as to the presence or absence of a racial susceptibility of the Negro to this disease. Many of the theories advanced, however, rest on conjectural rather than factual evidence, and there is a notable lack of definite clinical and pathological data.

Pinner and Kasper compared and reported the postmortem findings in 303 Negro and 219 white patients dead of tuberculosis. The study not only points out certain significant differences between the two races, but also throws light on the pathogenesis of tuberculosis in general. An abstract of the article follows.

TUBERCULOSIS IN THE NEGRO

The authors were impressed by apparently significant differences between colored and white patients dead of tuberculosis and decided to replace their impressions by carefully collected data. It has been shown that the most significant factor in the development of tuberculosis is the propagation of lesions within the body, and that one of the most important and probably the only definitely established fact about immunity is the diminution of spread of reinfecting bacilli in a sensitized organism as compared with a non-allergic one. A comparison of white and colored patients dead of tuberculosis as to the relative frequency of lymphatic and haematogenous spread (paying particular attention to the type and extent of metastases) was deemed to be of value in that it would indicate with fair reliability the degree of resistance during life. Some of the more notable findings are as follows:

Miliary Tuberculosis

Miliary tuberculosis was found at least twenty per cent more frequently in the Negro in every decade of life up to 50 and this is believed to be indicative of a low level of resistance. However, since on the other hand it may indicate nothing more than a mechanical accident, all cases of miliary tuberculosis are excluded from further consideration, and the remaining data deal with 190 Negroes and 185 whites.

Haematogenous Spread

Pointing out that the absence of metastases does not mean that blood stream invasion has not

occurred but may rather denote the degree of resistance (specific or non-specific) to such spread, the authors observe that haematogenous propagation occurs twice as often in the Negroes as in the whites, only grossly visible lesions being taken into account.

Lymphatic Spread

From the point of view of resistance, spread via the lymphatics regularly occurs following first focalization and indicates presumably that state of resistance which is characteristic of "virgin soil."

Eliminating all calcified foci in lymph nodes since they might be part of the primary complex and taking into consideration only grossly visible lesions, spread via the lymphatics occurred nearly seven times as frequently in the colored as in the white group.

Isolated Phthisis

In contrast to the foregoing is the occurrence of isolated phthisis or tuberculous disease of one organic system with no evidence of involvement of distant organs, and which would presumably indicate a high degree of resistance.

This type of lesion was present in nearly half the white patients and less than 3 per cent of the Negroes.

Duration of Disease

This information which was available for 96 whites and 47 Negroes gave a total average for Negroes of 324 days and for whites 995 days.

The authors were aware that the nature of

their material (postmortem) imposes limitations, since the differences noted between the two races are probably more pronounced on the postmortem table than in a sanatorium, and more definitely there than in an ambulant clinic. Nevertheless they feel that the material presented justifies some rather definite conclusions. In summary they find that the differences between Negroes and whites are as follows:

“The Negro shows much more frequently haematogenous and lymphogenous spread after a definite focus of tuberculosis is established; this tendency is indicated, too, by the fact that miliary tuberculosis is greatly more frequent in the Negro at all ages. His foci are more frequently exudative in nature, they are more frequently massive, and more often surrounded by collateral infiltrations or haemorrhagic zones. The most conspicuous of the differences is the much greater tendency to lymphatic involvement. The Negro exhibits at times a predominantly lymphatic involvement, which is an exceedingly rare occurrence in white adults. A generalized nodular tuberculosis occurs in some instances in Negroes which is hardly ever seen in whites. In addition, tuberculous lesions in the Negro perforate more often than in whites.”

These pathological peculiarities in the Negro are submitted as proof of a diminished resistance.

Various Theories Analyzed

Several writers have offered explanations to account for the lower resistance of the Negro:

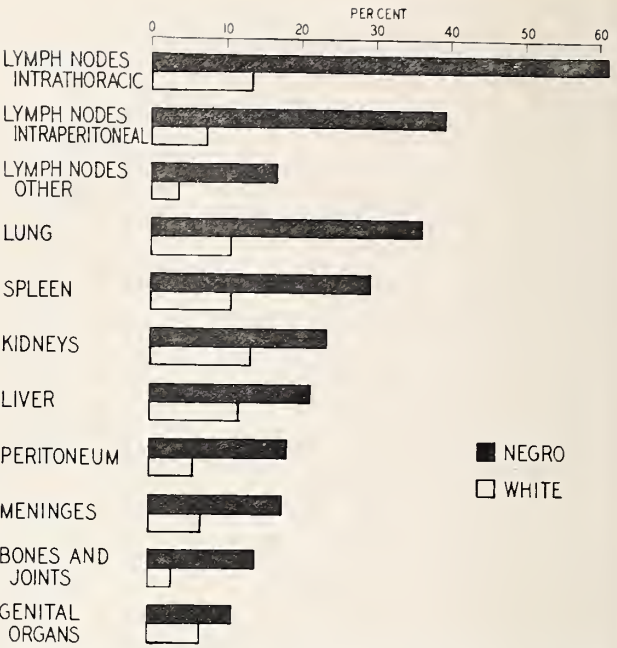
a) *It is said that the Negro, having been in contact with tuberculosis for a much briefer time than the white has not as yet had an opportunity to acquire the same measure of “inherited immunity.”*

The authors reply that this stands on unsafe ground since a true inheritance of acquired immunity has never been demonstrated.

b) *It is said that the Negro escapes childhood infection more frequently than the whites; therefore, an infection acquired later in life occurs in virgin (non-allergic) soil and produces rapidly progressive “childhood type” tuberculosis.*

The authors point to the results of large surveys, notably those of Opie and Aronson, which indicate clearly that this theory must be abandoned.

c) *It is alleged that the apparent differences are due to environmental conditions and to the mental attitude of the Negro in regard to disease.*



Metastases in single organs more frequent in Negroes than in whites. (Submitted as partial evidence of lower resistance in the Negro.)

The authors comment that undoubtedly the greater opportunity for infection in crowded, unsanitary quarters from many undiagnosed cases of open tuberculosis is probably one of the most important factors causing the high tuberculosis incidence in the Negro, but it is difficult to see how environmental conditions contribute to the qualitative peculiarities in Negroes. When unfavorable living conditions in Germany sent the tuberculosis mortality soaring, no reports came forth to tell of qualitative changes in the course and in the anatomical character of the disease.

d) *It is suggested that there exists a true racial difference between the two races, which confers high resistance on one and low resistance on the other race.*

This hypothesis recommends itself strongly to the authors because of the apparent impossibility of explaining the matter by any other alternative, and while this does not constitute proof, it seems at the present time the logical postulate and further studies should show whether it can be converted into an actual fact.

They would deplore violent attacks against such a theory on the ground that its acceptance might paralyze campaign measures now in use.

Pathological Peculiarities of Tuberculosis in the American Negro, Max Pinner and Joseph A. Kasper, Am. Rev. of Tuberc., Nov. 1932.

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EDITORIAL NOTES AND COMMENT

Impressions From A. M. A. Meeting

ONE was rather proud of the representation from Colorado—not all from the larger cities; even Steamboat Springs had an emissary. Hotel rates were good enough, beer was for those who cared, the lake shore drive for the motorist, the Chicago exposition (ballyhoo, and how!) en route . . . It's a long way to go from Colorado to play golf, but some did it . . . The President and Executive Secretary got lost among the breweries (there entirely by chance) and saw a forty-seven-car freight train pull out with forty-seven carloads of beer . . . One Milwaukee restaurant served only St. Louis beer! . . . Some of our finest saw the 1933 Gold Diggers (by confession) . . .

Radiologists had a special entertainment one evening. A prestidigitator worried some of us about our paper money, but it came back undamaged. The loudest talking man I ever heard, he was . . .

President's reception, as usual—some wore 'em and some didn't . . . House of delegates met in private groups and caucuses to do the real stuff. Open meetings, rather tiresome. Reactionary attitude evident throughout. The writer once wrote an editorial giving a scheme for certification of specialists (along about 1920 or 1921). Glad to see the delegates finally got around to adopt his plan. Wish I could feel the fruit grew on that tree.

The President-elect is a good choice for these parlous (look that up) times . . . Old

acquaintances and new. Am beginning to understand how our Denver run-about becomes nationally known . . . Exhibits, worth the trip. Soon available for us all is a new radiopaque solution for x-ray demonstration of urinary tract, oral administration. Films after oral method just as good as after intravenous method. Colorado orthopods would have enjoyed the cadaver dissection showing ruptured and frayed supraspinatus tendon and ruptured subacromial bursa. Identical twins and triplets were shown by x-ray to have identical skeletal development, even to anomalies.

Section meetings—I saw my own. Good review; some things new. Claude went over fine in his, discussed by reactionaries. Did the mike fuss him a little?

These impressions stick in one's mind:

Scientific practice is the goal—the road is open to all.

Organization matters are the means, conducted by a few.

We shouldn't put the cart before the horse, but we shouldn't minimize the contingent problems. The horse should be fed and the road smoothed.

One always carries back home something worth while. The finishing touch is often what makes the difference.

The rewards of merit are slow, but lasting. The rewards of push are quicker, but enemies are made; mean things are said and thought.

Cancer is still X.

Maybe we do some things pretty well at home.

Practice and research are quite different occupations, but they can blend. Relief of human suffering composes very little of the incentive to research. Even with the most zealous, accomplishment of the experiment and solving the problem provide the main interest.

The fellowship is worth a lot. Would like to go oftener.

F. B. S.

Agranulocytosis

SCHULTZ, in 1922, first reported a condition termed agranulocytic angina, since called also malignant neutropenia, granulocytopenia, and idiopathic neutropenia. These terms refer to a marked lowering of the leucocytes either without known etiology, accompanied by ulceration of the mouth and soft tissues, or following sepsis elsewhere in the body. It was at first believed to be invariably fatal, but in recent years undoubted cases have recovered following various therapeutic procedures—among them x-raying of long bones, blood transfusions, arsenic and liver extract administration.

Pentose nucleotides, derived chiefly from living cell nuclei, are present in normal human blood; nucleic acid and some of its derivatives stimulate leucocyte formation. With these facts at hand, Reznikoff in 1930 reported recovery in three cases following administration of purine salts derived from nucleotides. A nucleotide committee has since been working at Harvard to carry on this study. They have reported 74 per cent recovery in sixty-nine cases. The original preparation, "Nucleotide K96," is now known as Pentnucleotide (Smith, Kline and French Co.) after the suggestion of the Council on Pharmacy and Chemistry. It is given in amounts of 0.7 gm. dissolved in 10 c.c. of sterile distilled water, intramuscularly, twice daily until rise of the white count, then once daily until the count has been normal for three days. The same procedure is repeated in the face of relapses. In urgent cases the same dosage may be given intravenously in 100 c.c. of normal saline solution. The latter method is avoided

in myocardial weakness, as there may be a reaction consisting of nausea and dyspnea. The white and differential counts are normal by the tenth day of treatment in most cases.

More recently Foran, Scheaff, and Trimmer has reported remissions in five cases of granulopenia following parenteral and oral use of liver extract. They injected the equivalent of 100 grams of liver intravenously or intramuscularly every 8 to 12 hours until there was a definite rise in the total white and granulocyte counts or until marked clinical improvement. The extract was diluted to a volume of 20c.c. with distilled water. After recovery, oral or parenteral liver administration was continued in amounts sufficient to maintain normal leucocyte count. The disease has been considered due to defective function of the bone marrow. This appears logical in view of the leucopoiesis noted in studies upon the parenteral use of liver extract in pernicious anemia.

It is hoped that the new treatments will save many lives which would otherwise be lost.

Calcium Therapy

WE NOTE with interest the increasing scope and usefulness of calcium administration. Its importance in metabolism is receiving greater recognition and the significance of dysfunctions more clinical consideration. The function it plays in tooth structure and skeletal growth have long been recognized. So also has its use in peptic ulcer therapy wherein it acts as an efficient antacid without giving rise to alkalosis. Vitamin D therapy, together with calcium, is used in pulmonary tuberculosis. Other indications are many—among them allergic phenomena, nervous instability, spastic conditions, and blood dyscrasias.

More recently we observe the efficacy of calcium against various forms of pain. Good results have been obtained in neuritis, neuralgia, chronic arthritis, and headache. Its administration may or may not be accompanied by the parathyroid hormone. Incur-

able cancer pain has yielded to calcium in a few reported instances. Progressive myopia in growing children is frequently accompanied by calcium deficiency; favorable results are reported, in several instances, following calcium therapy.

Surely calcium deserves a prominent place among our useful drugs. Gratifying results will follow its more frequent use in the many conditions now known to warrant its administration.



Chronic Bone Disease and the Parathyroid Glands

RELEVANT to consideration of calcium metabolism, we note the role of the parathyroid hormone in its control. As early as 1903, it was believed that parathyroid dysfunction caused changes in the blood calcium and in the bones. It was later noted that their extirpation caused tetany. Analogous to hyperinsulinism, following the development of certain tumors of the Islands of Langerhans, is the fibrocystic decalcification type of bony changes from hyperparathyroidism accompanying parathyroid tumors. In recent years, the literature has contained a great deal of clinical and experimental data verifying the latter relationship. Certain workers have ventured to recommend removal of parathyroid tissue in cases of fibrocystic diseases of bone, even in the absence of tumors in these glands. Favorable results are recorded. This procedure is difficult surgically due to the varying location of these bodies. Great hope is therefore held for roentgen therapy in such cases, particularly where no tumor is palpable.

Medical workers in every field are interested in this subject and feel that many of the rarer bone diseases may yield their secrets of etiology within the pale of parathyroid dysfunction. One author avers that, since calcification is associated with the healing of tuberculous lesions, voluntary alteration and control of parathyroid function may some day cure tuberculosis.

Alleged Malpractice

PHYSICIANS in a number of states have been informed that malpractice insurance premiums have been raised—in many instances more than doubled. This is another by-product of the depression.

At least one type of lawsuit is avoidable, in spite of the fact that their increased incidence is due to former patients looking for "easy money" from the physician who has remained a vulnerable member of society. We should remember that many collection suits now, if won, would yield naught but a worthless judgment. In some of these instances the procedure will only devise mischief for the defendant's idle hands. He may reply with a counter-claim of malpractice, groundless or not. There is special danger among dissatisfied patients who would prefer an allegation of malpractice to a fair settlement of the bill. Danger also exists among the unscrupulous ones who would resort to any meanness to procure a judgment against a responsible physician or insurance company.

Now, more than ever before, it would be better to contact the patient tactfully—personally if possible. A frank discussion of pertinent facts, and the signing of a note or declaration of a moratorium, would ultimately yield more money and preserve the good will upon which the private practice of a profession depends. Why send good money after bad, lose valuable time, create ill feeling, and court litigation?



Oversupply of Physicians

ACCORDING to statistics, if the present ratio of increase in the number of physicians is maintained in this country, there will be 171,700 physicians in 1940; 186,600 in 1960; and 210,800 in 1980. Probably 120,000 could now care for our medical needs; there are 25,000 more than needed.

Those responsible for medical education and licensure must act according to these figures if the quality of service and type of student seeking the high professional status are to be unimpaired.

COMPLICATIONS IN THE TREATMENT OF CONGENITAL DISLOCATION OF THE HIP*

ROBERT G. PACKARD, M.D., and HAMILTON I. BARNARD, M.D.
DENVER

The purpose of this paper is to describe the methods of treatment in the many complications of dislocation of the hips. While our primary objective is to secure a stable joint with obliteration of the limp, we must also bear in mind the chances of subsequent arthritis or joint strain in imperfect reductions, and provide measures for their relief. In dislocations reduced by manipulation before the age of three years, a permanent cure results in a large percentage of cases with almost normal hips resulting, but in older children various open procedures in bone and joint surgery are often necessary. The number of good final results is still far from satisfactory.

The etiology of congenital hip dislocation is still unknown, although many causes have been suggested. The two most feasible theories are abnormal intra-uterine pressure and developmental anomaly of the joint structure. Dislocation is found twice as frequently in girls as in boys, occurs more often unilaterally than bilaterally, and is often associated with other congenital deformities. Races are probably affected alike, though the French, Italians, and Portuguese seem to present a greater incidence. So far as we know now, the condition is due purely to a structural or mechanical fault and is not the result of any inflammatory or infectious process.

The symptoms depend to a great extent upon the age of the child. The first indication of abnormality is usually a limp, described as a waddling gait, seen when the child begins to walk. This limp is due to the instability of the hip and shortening of one-half to two inches in the lower extremity. Examination then shows a prominent trochanter above Nelaton's line, a wide perineum, a deepening of the inguinal fold, and a moderate lumbar lordosis with more or less of a lateral curvature depending upon

the amount of shortening. The Trendelenberg test for instability of the hip is positive. There is usually no muscle spasm, tenderness, or restriction of joint motion. Palpation reveals the femoral head to be absent from the acetabulum and dislocation usually upward and backward. The diagnosis is made conclusive by the x-ray, which shows either a simple dislocation or one combined with additional anatomic variations. It is sometimes difficult to determine whether the condition did exist at the time of birth or occurred later. However, if there is no evidence of inflammatory process and there is no history of trauma, the condition is usually considered a congenital dislocation.

While the existence of congenital dislocation has been recognized since the time of Hippocrates, treatment has not become standardized but has always varied considerably. At present there is a growing tendency to open reduction as routine. History tells us that Pare attempted on several occasions to reduce dislocations but was unsuccessful. In 1888, Paci tried the manipulative or closed method and advocated its use. In the same year Pogi corrected a case by open reduction. However, Lorenz of Vienna succeeded in popularizing the closed method in Europe, while Ridlon, in this country, claimed that open reduction was almost never indicated and was so successful that it was heresy to contradict him. It remained for Haffa to describe the open surgical method of reduction. Thus for years the Lorenz and Ridlon manipulations were used almost exclusively, but in the last ten or fifteen years, with the x-ray playing a more prominent role, the late results have not been considered satisfactory. Now the pendulum is swinging over to open reduction, even though open surgery means the extra risk of infection, additional shock, and often later traumatic or pressure arthritis.

However, it is not purely a question as to whether we must decide once for all between the manipulative or closed method

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and the open surgical reduction. There are clear indications for each type of treatment. The objective, of course, is primarily reduction with restoration of the hip function to as near normal as possible, with good weight bearing, good stability, and a good degree of motion. The question of overcoming or greatly diminishing the shortening is secondary, though a limb equal in length to its fellow is naturally desired. Yet it must be remembered that a movable but painful joint is not as good a final result in adolescent and adult cases as a stiff yet painless joint.

The type of treatment then depends upon a number of factors. First of all, especially in the younger children, is the dislocation simple or complicated? In the simple displacement, we find the acetabulum well developed with a good more or less horizontal roof covering a socket of fair depth. The head of the femur, developing and showing the normal relation to the shaft, is displaced upward and backward. In this type of simple dislocation, there are two kinds of treatment available—either the closed method of Lorenz, Ridlon, or Putti, or one of the many open methods now practiced. The manipulative procedure should certainly first be tried as soon as the diaper stage is passed. The child is anesthetized, preferably with ether, and the Lorenz closed method of reduction attempted. The muscles of the upper femur are thoroughly and slowly stretched by forcible full flexion and abduction, then, by circumduction, the femoral head is made to pass from behind forward and downward underneath the acetabulum, then to slip up over the inferior lip into the socket. If the head reduces readily and good stability seems present, a plaster cast is applied—a spica of the hip from the rib margin down to the base of the toes, holding the lower extremity in the so-called frog position with the thigh abducted to 90° or 100° , the knee behind the plane of the body, the leg flexed to 90° , the amount of rotation of the limb depending upon the position of best stability. If a stereoscopic x-ray a day or so later shows the head in good relation, the cast is left on for about three months. In a unilateral case after a few days, the child is allowed up on some contrivance like

a Kiddie Car and in two weeks is able to walk, with the heel of the opposite shoe raised about two and one-fourth inches. In bilateral cases, the continuance of the Kiddie Car is advocated longer. At the end of three months the cast is changed and the thigh brought down to about 60° abduction in the second cast. This process is repeated every ninety days until, at the end of twelve or fourteen months, the thigh is down in a fairly normal position and the child is allowed to walk with or without crutches, the thigh still assuming a slight abduction by keeping the heel of the opposite shoe raised by one-half or three-fourths of an inch.

However, if reduction cannot be accomplished on manipulation, no cast is applied and the child is again allowed to walk and play for a few weeks before returning to the hospital. Before open treatment, the child should be in bed for two or three days to build up its resistance with rest, forced fluids, and sugar. The hip should be prepared as for any major operation. Any one of many classic incisions is made over the hip joint, the acetabulum and head exposed, the constriction in the capsule divided and the socket cleaned out if necessary, so that the head may be forced into the acetabulum. The good roof shown by preoperative x-ray will be demonstrated at operation. The capsule and other structures are closed without drainage. A plaster cast is applied with the thigh held in a little internal rotation and slight abduction. The cast is left on for twelve to sixteen weeks only. The prognosis in such cases is usually good for early function.

So much for the simple displacements, but there are the other types of cases with complications either shown on examination previous to the attempt at reduction or encountered during the course of treatment. We have met with the following: (1) Persistent absence or shallowness of the acetabulum, (2) Occlusion of acetabulum. (3) Absence or lack of development of the femoral head or capital epiphysis. (4) Anterior or posterior version of the head and neck of the femur. (5) Subsequent obturator dislocation. (6) Fracture of femoral neck or upper shaft. (7) Injury to sciatic nerve on

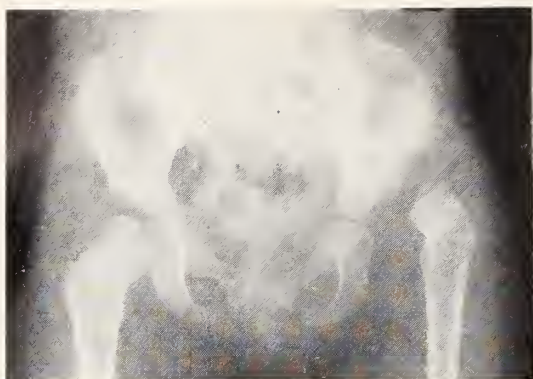


Fig. 1. A simple type of congenital dislocation of the hip in a child of 2½ years before reduction by the closed method. It shows a good femoral head and acetabulum with an oblique roof.

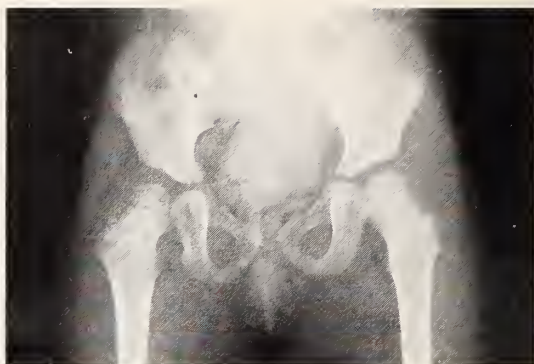


Fig. 2. Dislocation reduced by closed method. Acetabular roof is less oblique after 16 months making joint more secure.

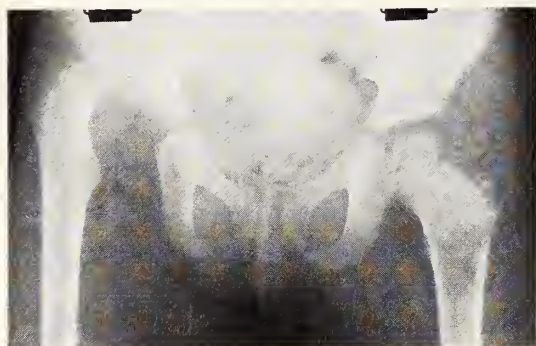


Fig. 5. Dislocation in a child of 3 years. Closed reduction was tried but not accomplished. Open reduction showed good femoral head and acetabular roof, but capsule constricted and acetabulum occluded.

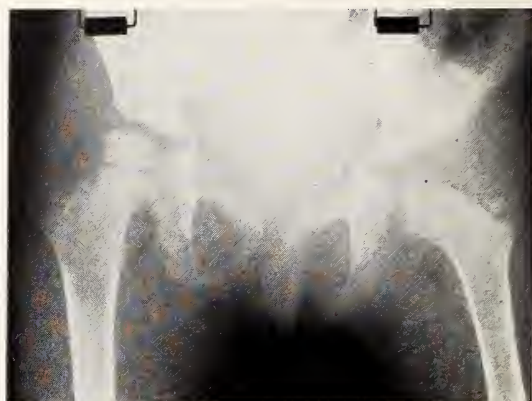


Fig. 6. Satisfactory reduction with subsequent good functional and anatomical results.



Fig. 7. An example of shallow or deficient acetabulum before reduction in child of 7 years, a high age for closed reduction.



Fig. 8. Same case five months later. A good false acetabulum created by shelving operation making serviceable hip. Reduction to true acetabulum was not practical in this child.

These figures have been selected from the series of lantern slides shown at the meeting and bear their original numbers.

manipulation. (8) Subsequent arthritis or joint strain with or without ankylosis or deformity. (9) Cases beyond the age limit.

Cases of persistent absence or shallowness of the acetabulum and cases of older children with high displacement of the femoral head are not so successfully treated by the methods described. The usual procedure now practiced is known as the shelf operation. By one of the classical approaches to the hip, the entire joint is exposed, likewise the outer face of the ilium above and behind the socket. After the head has been brought down and restored to as near its normal relationship to the acetabulum as practicable, an outer layer of the ilium is raised by chiseling above and behind the site of the socket, forming by its ilial attachment a flap of fresh bone which is thrown forward and outward as a shelf or ledge over the femoral head. Additional bone chips are taken from the outer face of the ilium to help sustain this shelf. Another procedure similar to shelving is the dropping down of the lower half of the upper lip of the acetabulum after splitting the lip in two and inserting a graft of bone to maintain the lowered half in its new relation to the socket. In either case the wound is closed without drainage and a cast applied with the thigh in slight abduction and internal rotation in which position the patient remains about twelve weeks or until the new socket seems adequate.

A lot has been written about another complication, namely, the anteversion or forward angulation of the femoral head and neck. Its importance has been strongly stressed by many operators and as often belittled by others, many of whom claim the anomaly will right itself after early reduction. We believe, however, that in no small number of cases, after primary closed or open reduction, the best final results are obtained by a subtrochanteric or supracondylar osteotomy.

Let me now mention another complication occurring in the course of treatment that we have not found mentioned in the literature, namely, a subsequent obturator dislocation. One of our cases, a child aged three years, showed such a dislocation fol-

lowing a normal reduction, as confirmed by x-ray. The reduction of the obturator dislocation was accomplished by adhesive plaster traction downward after removal of the cast.

An unfortunate complication, occasionally occurring early or late during the course of treatment, is fracture of the femoral neck or shaft. We observed a case of congenital bilateral dislocation of the hip two years after treatment was instituted. At the time of the first manipulation, the one hip was successfully reduced, but forcible manipulation of the opposite hip produced a subtrochanteric fracture.

Another complication that we had was that of sciatic nerve injury with permanent paralytic foot drop, due probably to stretching or severe bruising of the nerve at the time of attempt at reduction by the closed method. This case showed a poor final result with bone atrophy, shortening of the limb, and peroneal paralysis. The redeeming feature, however, was that the permanent foot drop compensated to a slight degree for the resulting shortening of the limb.

A major complication that occurs in late adolescent or adult cases is the pain that supervenes in reduced cases. This may be due to the joint strain resulting from increasing weight where the hip dislocation has not been perfectly reduced on account of the age of the individual or on account of the primary marked displacement. It may also be due to what we are pleased to call a traumatic, pressure, or absorptive arthritis. Such a case of arthritis occurred in an older child where a shelving operation was done. About thirteen months later x-ray showed an excellent false acetabulum formation created by the shelving operation. There was, however, a considerable arthritis present with pain and loss of motion. For further treatment in such a discouraging complication, four operative procedures may be offered: (1) Arthrodesis. (2) Osteotomy at or below the trochanter to make more contact between the head and the ilium so as to prevent muscle strain. (3) Shelf operation. (4) Excision of the head, probably to be followed by some ambulatory caliper brace to take the body weight. Of these four

methods, probably the best one, by far, is arthrodesis to get definite relief of pain, even if it means sacrificing the little motion present.

Our final complication is that of over-age. This is especially true in bilateral cases in children beyond the age of nine, where the limbs are of equal length and the hips are fairly stabile.

In our series of over a hundred cases, almost one-half showed one or more of the complications enumerated and necessitated

a change in the ordinary routine of treatment. The final results, while usually benefiting the patients, have not been entirely satisfactory. The type of treatment to use is often, of course, debatable. We should treat all cases as early as possible. Attempt closed reduction between the ages of three and five. If unsuccessful, do open reduction and when necessary shelve the acetabulum, treating the complications as they present. In cases of subsequent arthritis, arthrodesis generally affords the best final functional result.

CORRECTIVE TREATMENT OF COMPRESSION FRACTURES OF THE SPINE*

ATHA THOMAS, M.D., and CHARLES E. SEVIER, M.D.
DENVER

Compression fractures of the spinal vertebrae occur more frequently than generally is realized, and often result from apparently trivial injuries with relatively mild local symptoms. For that reason they are commonly overlooked, being dismissed as simple contusion or back strain.

These fractures are the result of a sudden violent forward flexion of the spine, compressing the vertebral body in its vertical axis and producing the characteristic wedge-shaped deformity, so plainly seen in the lateral radiograph. Crushing blows across the back and shoulders from falling objects, falls from a height with the back bent forward, and automobile accidents in which the injured person is thrown upward and forward, forcing the spine into sudden flexion, are the most common causes. The vertebrae most frequently involved are the twelfth dorsal and the first and second lumbar, but none is exempt.

As stated, the pain is often slight and the seriousness of the injury is not realized. In all accident cases complaining of back pain and giving a history of having been struck across the back, or having been thrown, or having fallen, it is a safe rule to insist on carefully-taken x-rays with lateral as well

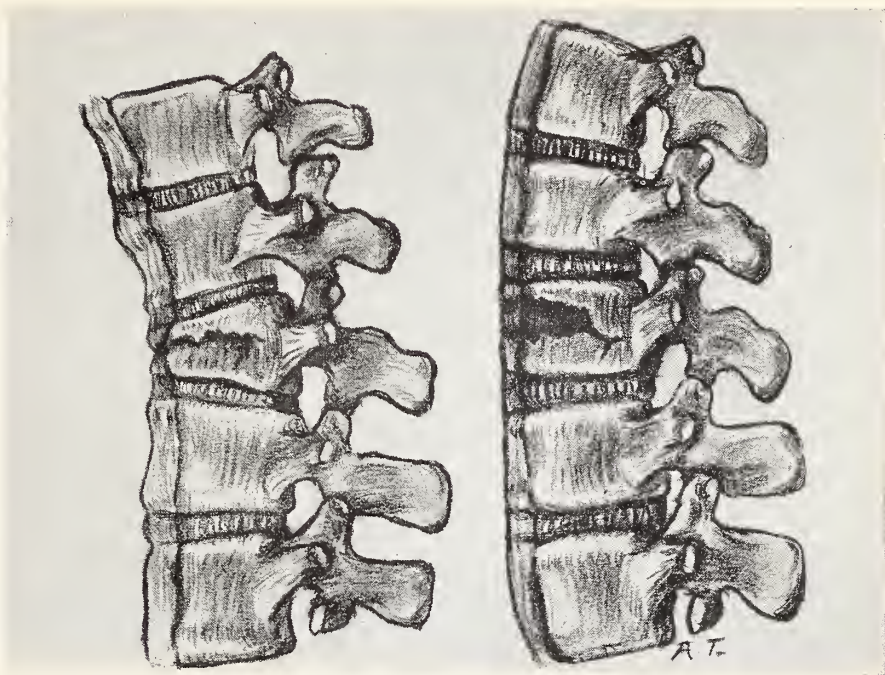
as antero-posterior views—for only by such x-rays can a positive diagnosis be made.

The patient suffering with such a fracture complains of pain in the back, sometimes radiating anteriorly along the ribs or into the abdomen; but, as emphasized, this pain may be trivial and is often located below the site of fracture. Considerable abdominal distension may be present but usually does not manifest itself for several hours or even days after accident. Tenderness and swelling over the spinous processes of the affected vertebrae are common findings. Deformity, as evidenced by a localized knuckling or kyphosis at the site of fracture is present only if the wedging of the vertebral body is quite marked and often does not appear except in old untreated cases. Limitation of motion and rigidity or spasm of the spinal muscles are always present to some degree. Neurological signs are exceptional, unless there is a complicating dislocation or damage to the vertebral arches. In old, untreated cases with increasing deformity, there may be paresthesias, increased reflexes, and weakness in the legs, evidencing cord irritation.

Until recently, the treatment of these fractures has consisted of prolonged fixation with cast, brace, or frame with the hope of obtaining bony union, regardless of deformity. Operative fusion of the spine at the

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 10, 1932.

Fig. 1. Diagrammatic drawing illustrating the mechanics of correction of compression fracture of a vertebra by hyperextension of the spine, and showing the part played by the common anterior ligament in bringing about this correction. "The interlocking segments of the spine above and below the level of the fracture provide a pair of unusually powerful levers, which correct the deformity by a pull exerted through the common anterior ligament."—R. Watson Jones, *British Medical Journal* 1: 1931.



site of fracture also has been carried out with the hope of lessening the marked disability that is the usual result of such fractures. Neither of these methods has proved very satisfactory, however, as revealed by a study of a large series of reported cases. In 1927, one of the writers¹ reported forty-six cases of compression fracture among industrial workers, in which more than half of the number had a permanent disability averaging over 50 per cent. Cleary² has reported fifty-two cases in which the rating was 40 to 50 per cent and higher. In Johnson's³ series, the disability varied between 45 and 75 per cent. Eikenbary⁴ states that in more than seventy-five state industrial patients not more than five were returned to hard labor without considerable disability, figures ranging from 10 per cent up. He further states that in a series of over 150 cases in which fusion operations were done, not one was able to return to his former occupation. Harbaugh and Haggard⁵, in a most comprehensive study of the end results in fractures of the lower spine examined and rated by the California State Industrial Accident Commission, report an average disability rating of 45 to 50 per cent, the disability in cases operated upon being slightly higher than in those treated conservatively. Kess-

ler⁶, in his recent book on the medico-legal aspects of Workmen's Compensation, gives 50 per cent as the average permanent disability rating of cases with compression fracture.

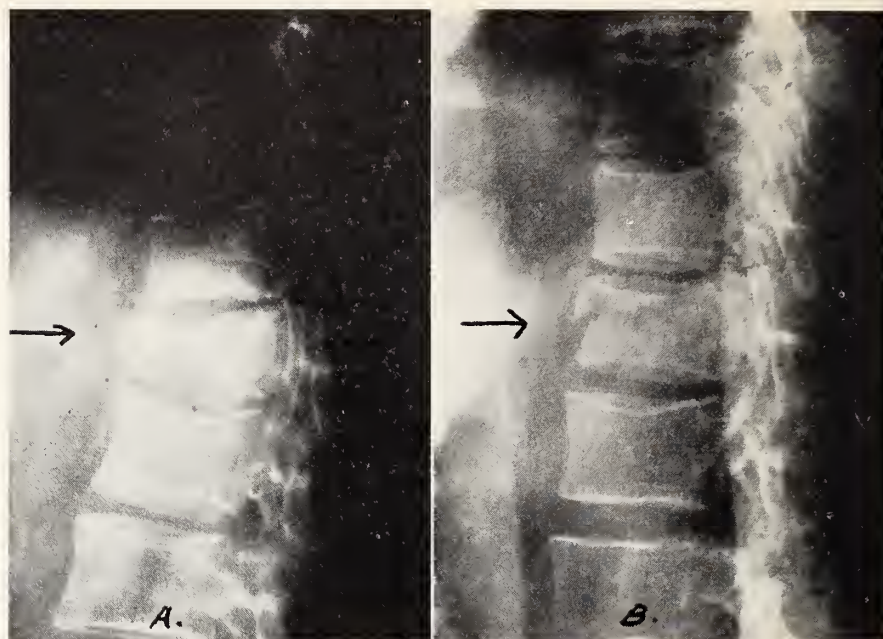
Within recent years, however, certain corrective methods of treating these cases have been described, which bid fair to overcome this gloomy prognosis. Langworthy⁷, Thomson⁸, Davis⁹, Dunlop¹⁰, Rogers¹¹, and R. Watson Jones¹² have described procedures which correct the spinal deformity and restore the compressed vertebral body to its normal contour. These methods, while varying in detail, have this important principle in common—correction of the deformed vertebral body by extreme hyperextension of the spine. As stated by Rogers¹¹, this correction of the deformity of the crushed body is necessary to assure restoration of function of the back, as the forward-bent position results in a compensatory lumbar lordosis which is maintained only by sustained muscle action. Strain follows, causing backache, fatigue, and economic disability.

The method of correction described by Davis⁹ consists of placing the anesthetized patient prone upon a table with the feet fastened together and suspended by a rope

Fig. 2. Compression fracture of first lumbar vertebra, corrected two weeks after accident by immediate manipulation in hyperextension without anesthesia.

A. Before correction.

B. After correction (through cast).



passed through an overhead pulley. The legs are elevated until the pelvis and lower trunk are lifted from the table and pressure is exerted over the site of fracture, forcibly hyperextending the spine. A body cast is applied with the spine in this position.

Dunlop¹⁰ obtains correction by placing the anesthetized patient face up with the spine hyperextended across a folded sheet passed transversely beneath the body and held taut by two assistants. Strong traction is exerted on the hands and feet of the patient by operator and assistant and the patient is tossed straight up in the air and his weight caught on the taut sheet in the descent, extreme

care being exercised to keep the spine in hyperextension. A body cast then is applied, maintaining hyperextension.

The Rogers¹¹ method differs from the above two in that correction is obtained by a very gradual hyperextension of the spine by means of an adjustable frame. The patient is placed on the frame with a slight upward concavity; then hyperextension is increased gradually until an angle of 45 to 60 degrees is reached. This takes a week or ten days, and then what is described as a "three-point jacket" is applied. The three points held fixed by the cast are the upper end of the sternum, and anterior superior

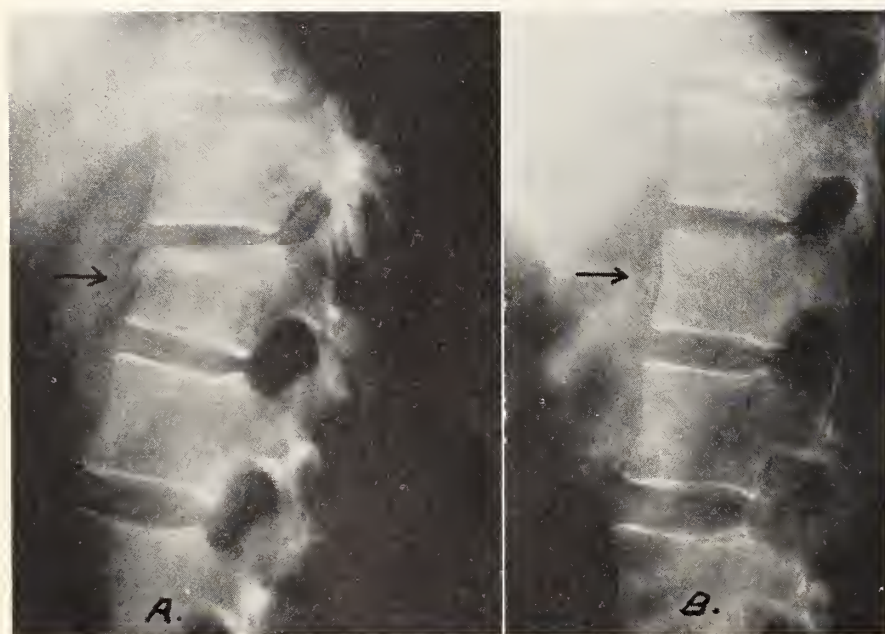


Fig. 3. Compression fracture of the twelfth dorsal vertebra, corrected twenty-four hours after accident by immediate manipulation in hyperextension under general anesthesia.

A. Before correction.

B. After correction (through cast).

spines in front, and the site of fracture posteriorly. In this way, the extreme hyperextension is maintained. Such a cast can be applied by the use of the well-known Goldthwaite irons, described in all orthopedic textbooks, or simply by suspending the patient prone on a canvas sling with the hyperextension well maintained.

The most recent method is that described by Watson Jones¹² in the *British Journal of Surgery*. It is simplicity itself and, judging from his reports, is just as effective as the other more complicated methods. It is especially applicable where proper equipment and assistance are lacking. Two tables are arranged end to end, with the space between slightly greater than the length of the patient's trunk. The front table is raised on blocks or chairs, so that it is about two feet higher than the other. The patient is now lifted face downward into such a position that he is gripping the edge of the higher table with his abducted arms. The lower table supports his lower limbs as high as the upper thigh, but between the neck and the groins there is no support. In this position the spine sags gently into full hyperextension. Not only is a general anesthetic unnecessary, but the position required can be maintained much more easily by a conscious patient than by an anesthetized one. A plaster of Paris jacket is applied in this position, well moulded to the curve of the spine, the sacrum, and the iliac crests, and extending

up to the neck, front and back. Jones reports excellent results in sixty-five cases.

The after care of these patients is most important. The plaster jacket is kept on for a period of two to four months, during the latter part of which time the patient can be ambulatory. A steel brace of the Taylor type, extending from sacrum to neck, is then applied; this is worn for about a year. Union takes place slowly in the fractured body and it is important that every precaution be taken to maintain the hyperextended position and prevent recurrence of the deformity.

One important cause of weakness, pain, and disability, especially in the industrial cases, is the marked muscle wasting that takes place during the prolonged period of immobilization. To prevent this, a system of exercises to be carried out daily is strongly recommended. Such exercises restore muscle tone, shorten convalescence, and put the patient in much better physical condition to return to manual labor. Briefly, the exercises are as follows: With the patient lying on face, (1) each thigh is lifted alternately from the table with the knee straight; (2) both thighs are lifted together; (3) the head and neck are raised against resistance. These exercises can be carried out while the patient is still in bed and in a cast. Their importance cannot be emphasized too strongly, as stated by Rogers, Watson Jones, and Hempel¹³.

Fig. 4. Compression fracture of the twelfth dorsal vertebra, corrected by immediate manipulation under general anesthesia, by Dr. John Foster, and reported with his permission.

A. Before correction.
B. After correction.

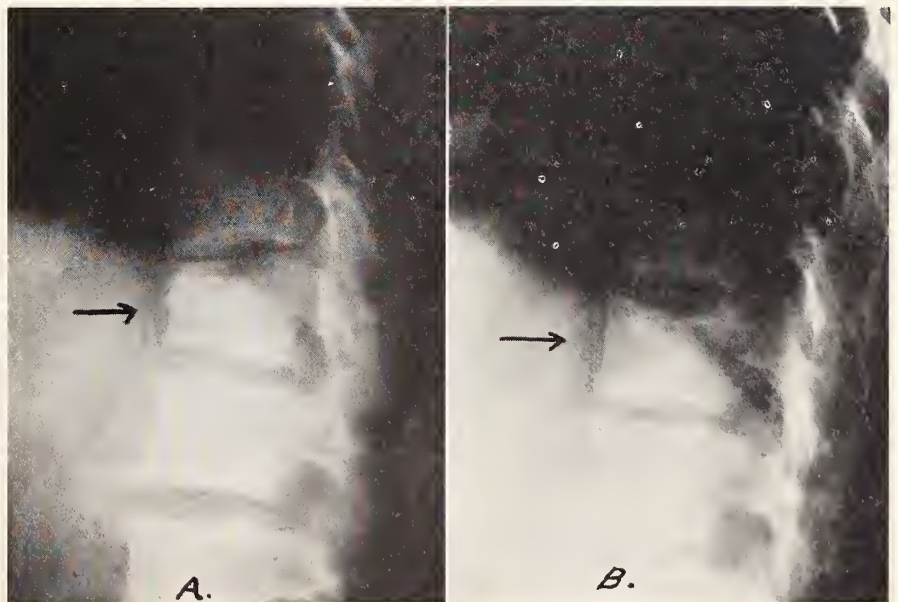
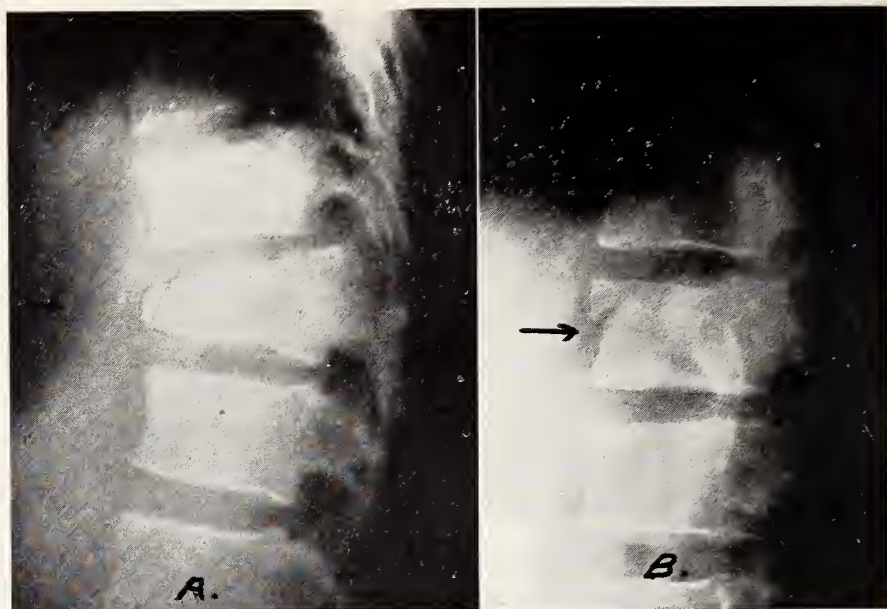


Fig. 5. Compression fracture with dislocation of twelfth dorsal vertebra, corrected by immediate manipulation under general anesthesia, by Dr. J. E. Struthers, and reported with his permission.

A. Before correction.

B. After correction (through cast).



Conclusions

By means of corrective methods of treating compression fractures of the vertebrae, normal restitution of the fractured vertebrae is obtained, disabling deformity is prevented, periods of temporary total disability are shortened, and permanent disability is lessened.

Summary

(1). Compression fractures of the vertebral bodies are common injuries, often due to apparently trivial causes, and are frequently overlooked.

(2). Disability is marked and prolonged under older methods of fixation.

(3). Anatomical restitution of the deformed vertebra is desirable and can be obtained by corrective methods based on the principle of extreme hyperextension of the spine.

(4). Regular daily exercises of the trunk muscles constitute an important part of the convalescent care of such cases.

(5). Radiographs illustrating compression fractures corrected by such methods are shown.

REFERENCES

- ¹Thomas, Atha: *Colorado Medicine*, January, 1928.
- ²Cleary, E. W.: *California & Western Medicine*, May, 1924.
- ³Johnson, H. F.: *Nebraska State Medical Jour.* V. XXI, No. 1, p. 1, Jan., 1927.
- ⁴Eikenbary, C. F.: *Journal American Medical Association*, Vol. 99, p. 1694, December 1, 1928.
- ⁵Harbaugh, R. W., and Haggard, R. E.: *California & Western Medicine*, Vol. XXXII, p. 325, May, 1930.
- ⁶Kessler, Henry: *Accidental Injuries*, Lea & Febiger, p. 317, 1931.
- ⁷Langworthy, Mitchell: *Northwest Medicine*, January, 1927.
- ⁸Thomson, J. E. M.: *Jour. Bone & Joint Surg.*, Vol. X, No. 2, p. 2400, April, 1928.
- ⁹Davis, Arthur G.: *Jour. Bone & Joint Surg.*, Vol. XI, No. 1, p. 133, January, 1929. *Ibid.* *American Journal of Surg.*, Vol. XV, No. 2, p. 324, February, 1932.
- ¹⁰Dunlop, John, and Parker, Carl H.: *Jour. Amer. Med. Assoc.*, Vol. 94, p. 89, Jan. 11, 1932.
- ¹¹Rogers, W. A.: *Surgery, Gynecology, & Obstetrics*, Vol. 1, No. 1, p. 101, January, 1930.
- ¹²Jones, R. Watson: *British Medical Journal*, Vol. 1, p. 300, Feb. 21, 1931.
- ¹³Hempel, A.: *Deutsche Zeitsch. fur Chir.*, Vol. 220, p. 299, 1930.

A Bequest for a Cancer Cure

Under the terms of the will of Mrs. Katherine B. Judd of New York City, a bequest of a \$30,000 trust fund was left to the Johns Hopkins Hospital in Baltimore. The will provides that an income of \$1,000 be paid annually "to the person who, in the judgment of the trustees, shall have made the greatest advancement toward the discovery of a cure for cancer." The rest of the income is to be used for the relief of cancer patients. A \$15,000 bequest is made available from the principal upon satisfactory proof that a cure for cancer has been discovered and perfected.—(N. Y. Times, January 6, 1933.)

THE GENERAL PRINCIPLES OF RADIATION THERAPY OF TUMORS*

W. WALTER WASSON, M.D.
DENVER

From the combined efforts of many scientists, radiation therapy has advanced from the realms of experiment and controversy to be accepted as a definite aid in the treatment of many diseases. If one can select even one disease in which it is of value, and a few of the recognized methods of treatment of that disease, then real progress has been made. For the successful management of any disease there must be mutual agreement within the medical profession upon the general principles in the treatment of that disease. Such an attempt in the radiation therapy of tumors offers considerable hope of success. While the number of years in which this method of treatment has been used is not great, the advancement has been unusually rapid. The rapidity of advancement has been due to the combined efforts of scientists, working both individually and in the laboratories of our universities; the observations of surgeons, physicians, and radiologists; and finally, the building of adequate equipment by the manufacturers of apparatus. The scientist has been particularly interested because the x-rays have given him a means of attack upon the very basis of matter. The physician has been particularly interested in the knowledge of the x-ray and radium gained by the scientist, as this knowledge has given him new agents for the attack of disease. There probably is a very close relationship between molecular disintegration and cellular destruction.

The first consideration in the radiation treatment of tumors, as in the treatment of any disease, is an accurate diagnosis. An accurate diagnosis is dependent upon the effort expended in the search for symptoms and the analytical evaluation of these symptoms. Since this paper is concerned with general considerations rather than the details of any one, it is not advisable to enter upon a description of the methods of diag-

nosis. The methods employed are not different from those employed in the diagnosis of other disease and are dependent upon the skill and judgment of the physician. However, as the results of treatment depend so much upon it, I do wish to emphasize the necessity for accuracy. Most diseases have a great tendency toward recovery, if the physician is not too meddlesome; but this is not true with cancer. The human being has very little resistance to cancer, and for it the physician must choose a course of active treatment in which the results will depend almost entirely upon his judgment in the selection of the method of treatment and his percentage of accuracy in its application.

This brings me to the second consideration, which is the question of the microscopical study of a section of the tumor. It is true that the attending physician or surgeon may often make an accurate diagnosis differentiating a benign or inflamed tumor from a cancer by the gross appearance or by the sense of touch. Yet, at the present time, one must obtain a section whenever possible. There are conditions, however, which regulate the removal of sections. If the field of removal is to be contaminated, and if any remaining tumor cells may be taken up by the blood or lymph stream, then no section of tissue should be made. It is considered permissible to take a section from a cervix if the surgeon is careful in his manipulation, but never through a tumor of the breast where the nodule is closed after the operation. In the case of the breast tumor, only a block resection should be done, and even that is questionable without preoperative radiation therapy. Of course, the study of the microscopical section must be made by one especially skilled in that field and, wherever there is any doubt, a consultation of pathologists should be held. Too infrequently an inflammatory mass is called cancer, and a successful result is attributed to radiation therapy or to a radical operation.

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932.

On the other hand, too frequently a cancer is overlooked.

The third point for discussion is that of metastases. The malignancy of a tumor is dependent upon its ability and tendency to form metastases. It is conceivable that a tumor may be potentially malignant by its cells being only loosely attached to their supporting framework, but owing to the location of the tumor or from its being surrounded by connective tissue, it is not readily accessible to the blood or lymph channels. On the other hand, I have observed the first sign of cancer of the prostate to be the enlargement of the glands above the left clavicle. In such a case the cancer has spread along the retroperitoneal glands and the thoracic duct to emerge above the clavicle where the thoracic duct empties into the left subclavian vein. Surgery or radiation therapy of the prostate in such a case are of little value. It therefore becomes of the greatest importance to endeavor to determine the extent of possible metastases as soon as the diagnosis of cancer has been made. As just stated, the location and nature of the tumor particularly influences one in suspecting the probability of blood or lymph stream contamination. A search should be made for metastases in distant organs as well as in the immediate regional lymph nodes. I have repeatedly seen the radiograph of the chest reveal an unsuspected metastasis in a sarcoma of the bone or cancer of the breast. It is now generally conceded that unless the original tumor and its regional metastases can be entirely removed, surgery is seldom indicated. Likewise, in such a case radiation therapy should not only be directed to the primary tumor but to a considerable area beyond the known secondary metastases. It is not the primary tumor but the metastases that usually kill!

The degree of malignancy must be thought of as separate and distinct from the question of metastases. A highly malignant tumor without metastases can be more dangerous than a fibrous tumor of low malignancy with metastases. Frequently one will see the tumor cells lying free in the blood or lymph channels ready to be dislodged and

carried to the nearest lymph node or distant organ by the manipulation of surgery or by even the customary diagnostic examination. The approach to the treatment of such a tumor will be a point of controversy for future years. Given a primary tumor of high degree of malignancy and no metastases, surgery is the present method of choice provided a clean removal may be made. The question of a complete and clean removal is always so doubtful that even here preoperative radiation therapy is being given great consideration. Certainly if such a tumor is not readily accessible and a clean removal cannot be made, or if metastases are present, preoperative radiation therapy is justifiable and offers hope of a higher percentage of cures. It has been my experience that x-ray therapy directed toward a cancer of the cervix until the healing has begun, and then followed by the dilatation of the cervix and implantation of radium, gives fewer cases of metastases into the broad ligaments than if the dilatation and implantation of radium is the earlier procedure. Certainly our first consideration should not be the local tumor of the cervix, but the probability of metastases.

Frequently the problem of treatment of an advanced malignancy is presented. Such cases appear so hopeless and the cost so great that any treatment seems inadvisable. It is not justifiable to treat such a case by radiation therapy or any other method for a period of months with no results and leave the family with a debt that will require years to pay. On the other hand, I have observed many families kept intact from two to four years as a result of radiation therapy when the case had appeared hopeless. Many times such periods mean much to the family. Judgment must be exercised by the physician in such cases, and the family must assume some of the responsibility in the decision of no treatment. Cases such as wide-spread sarcomas involving vital organs, such as the liver, may be carried until the patient has finished a certain piece of work or enjoyed a long postponed trip. Judicious treatment in advanced tumors lessens the pain and discomfort of the final

stages. In the less advanced cases which are non-operative, radiation therapy may bring about healing to the point where operation is advisable. Usually my results from operation in these cases have been discouraging. If a case has been truly an advanced malignancy with widespread metastases, and it has responded to radiation therapy, then it is wise to be content with whatever relief is gained by the therapy. By an occasional application of radiation therapy, such a case may be carried for years. Happy results of this type are not the unusual experience of radiologists. I observed a case of metastatic cancer of the right lower quadrant following the removal of a cancer of the cecum of a young girl for whom radiation therapy held the process in check for ten years. The patient was able to enjoy life during this time and died from an intestinal obstruction.

If after the foregoing consideration, radiation therapy is decided upon as the method offering the most for the patient, then the technic of its application should be left to one especially skilled in its use. Today, the effects of the roentgen ray and radium emanation are well understood, and these rays can be accurately measured. Results depend upon the intelligent application of the various quality rays for the part involved and the kind of tumor treated. It is not sufficient for the physician undertaking this work to have a second-hand knowledge or some general idea of the effects and dosage of the roentgen ray or the gamma ray of radium. If any physician wishes to make this method of treatment a part of his practice of medicine, then he should spend the same time in preparing himself for it as he would for surgery or any other specialized branch of medicine. A specialty is not a branch of medicine allotted to a few by the laws or rules of special societies, but by special qualifications from years of study.

Some malignant tumors are very sensitive to radiation therapy. I recall one tumor of the kidney, with lung metastases, which broke down very rapidly under the mildest doses of roentgen ray, and the patient died of brain embolus. The less fibrous tissue any tumor may contain, and the more embryonic the cellular con-

tent, the more easily it will respond to radiation therapy. The quantity of rays which would destroy a cellular tumor would have no effect upon a scirrhous one. The technic of radiation therapy then comprises knowing what quality and amount of radiation to give any certain tumor and the metastases at any given distance from the skin surface or any given distance from the tube of radium. The frequency of treatment is of equal importance. The best results are not obtained by one single large dose, but by frequent small doses at regular intervals over a considerable period of time. The patient's reaction and a knowledge of the rapidity of cell division are the guiding factors in the frequency of the treatments. It is not sufficient to insert a tube of radium into a tumor such as a carcinoma of the cervix for a given number of hours and consider that the patient has been given every possible benefit to which she is entitled.

The management of a case undergoing radiation therapy can best be handled by the consultation of the physician in charge, a surgeon, and the radiologist. As just stated, the technic of application of radiation, including the frequency of dosage, should be left to the judgment of the radiologist. There are, however, many points concerning the patient which he would prefer to leave to the internist or surgeon. The question of local infection of the tumor is a most important one and frequently is the exciting cause in extreme degrees of malignancy. The surgeon's advice is often indispensable in such cases. On the other hand, the biochemical problems which play such a prominent part in cases undergoing radiation therapy can best be handled by the internist who is daily thinking along biochemical lines. Finally, there are those emergencies which are constantly arising with these patients who are critically ill and which can best be handled by a consultation of those with intimate knowledge of the problems involved. It is not correct to blame some unexpected and obscure complaint during or after a course of radiation therapy upon the roentgen or gamma ray. The patient may have some other pathological condition which has been overlooked.

The follow-up of patients who have had radiation therapy is of value almost equal to the original radiation treatments. To the patient it means constant observation and the benefits to be derived from treatment at the first evidence of any return of malignancy. Such treatment may mean the arrest of a returning malignancy or even a complete eradication of the disease. The patient is seldom able to evaluate his symptoms and may postpone returning for examination until there is a large tumor present. Therefore examinations should be at least every three months during the first two years after treatment and once a year for succeeding three years. I recall one case with a breast cancer in which there was a return twelve years after the last treatment. In another patient who had a return eight years after her breast amputation, the pathologist was able to state that the cancerous nodules in the skin had originated in the breast. This case responded to roentgen therapy. Beside the value to the patient, there is a great value to the physician himself from study of these follow-up cases. In no other way can the radiologist have a knowledge of the benefits derived from his treatments. Every radiologist must keep such a list and make frequent follow-up examinations. It means considerable work without pay, but adds greatly to his ability to advise for or against certain types of treatment. Further, it gives him an intimate knowledge of the changes which take place in the resolution and healing of pathological processes.

As a final consideration, I wish to discuss the symptoms of pain in those patients who have had treatment, surgical or radiation therapy, for malignancy. I have been impressed with how often the attending physician passes by the symptom of pain as of no consequence. Usually it is called arthritis, and the patient is given aspirin. This is never justifiable until a careful search for metastases has been made, and even then the patient must be asked to return for frequent examinations. A patient who has had a recent malignancy and then suddenly develops localized pain with or without tenderness and without previous arthritis, most certainly has a metastasis. Such cases are

common. Recently I saw a case in which the roentgenogram showed an area of rarefaction in the second lumbar vertebra and the attending physician suspected arthritis. A nodule removed from the scar of the right breast a few days later confirmed the diagnosis of metastasis to the lumbar spine. In another case I made repeated roentgenograms of the thoracic and lumbar spine because of pain in the lower thoracic region, only to find that the metastasis was in the liver. In my opinion, after treatment for malignancy, pain is usually the first warning signal of metastasis.

Conclusions

In presenting this paper on the general principles of radiation therapy of tumors, I have endeavored to select those principles which are broad in their scope, of great importance to the patient, and concerning which there can be no great amount of controversy. It is hoped that they may be of value to the attending physician in his approach to the treatment of a tumor, and aid in his follow-up of the case after treatment. The selection and arrangement has been based upon my personal experience and the present day accepted information upon the subject. There are nine points which I have presented:

1. There should be a careful examination of the patient with an analytical evaluation of the symptoms present.
2. There should be a judicious and never a contaminated removal of a section of the tumor for the microscopical diagnosis between inflammatory, benign, and malignant neoplasm.
3. In the preliminary examination, the amount and extent of metastases should be determined. It is nearly always the metastases that are fatal to the patient.
4. The degree of malignancy is of great importance in selecting the method of treatment—surgical or radiation therapy. It even governs the manipulation of the tumor during the preliminary examination.
5. In advanced cases of malignancy, if any treatment at all is justifiable, radiation therapy is nearly always the method of choice. The economic problem must be given special consideration in these cases.

6. If radiation therapy is selected as the method of choice, then it should be applied by one especially qualified for the particular task at hand.

7. The general management of the case should be under the direction of a radiologist, a surgeon, and the attending physician.

8. Every radiologist should keep an active follow-up list of his cases which have undergone radiation therapy.

9. Pain following surgical or radiation treatment is usually the first warning signal of a return of active malignancy in either the primary tumor or its metastases.

ABSTRACT OF DISCUSSION

T. Leon Howard, M.D., Denver: I heard Dr. Stevens read a paper not long ago in Wyoming in which he demonstrated bone metastatic growths from a malignant prostate, and I am going to discuss Dr. Wasson's paper from a urological standpoint. It is strange how many patients come to the general practitioner (and the general practitioner sees these patients before a urologist ever sees them) complaining of pain in the perineum and down the adductor muscles. If a patient is at the prostatic or cancer age, I certainly would be suspicious that the patient might have a metastatic growth in the pelvic bones secondary to a malignancy of the prostate. Do you realize how often cancers of the prostate occur? Twenty per cent of all prostatic tumors are malignant in men past fifty. Do you realize how many prostates are removed supposedly benign that turn up in the next four years malignant? It is astounding, but, practically speaking, 20 per cent of those cases come back as malignancies, and frequently their first symptom is pain in the region of their adductor muscles and in the perineum.

What is to be done with a cancer of the prostate? Very little! Dr. Wasson has tried to show you that the least that is done with a lot of these malignancies under certain conditions, the better off we are, and this is true in cancers of the prostate. If you let these cancers of the prostate alone and do as little with them as possible from a surgical standpoint, those patients live the longer, but try to remove the prostate and your patient is dead in a few months. I advise all of my patients in whom cancers of the prostate have involved the bone, and the pain is from that area, to take radiation. You are not curing that patient but are giving some relief, because apparently radiation of those bones does give relief from pain.

There are three primary cancer areas that produce metastatic changes in the pelvic bones. The greatest majority are from cancer of the prostate; second, a rare condition of an adenocarcinoma of the kidney; and the breast is the third one. Testicular cancer is the most malignant of all cancers, in my experience, and I have seen those so-called teratomata absolutely dissipated through the entire system by the osteopath who massaged them. I have seen secondaries appear on the end of the patient's nose and the tip end of his fingers following osteopathic massage, and this only goes to show that you had better be careful

of this tumor unless you know what you are doing. They recur, as a rule, around the pelvis of the kidney, being transmitted through the lymphatic system. It has been the custom in the past of many urologists to attempt to remove all the post-peritoneal lymphatics following the removal of a malignant testicle. To me that is impossible. To my mind, the lymphatic system is the poorest worked out of our anatomical systems. There is less known about it, less attention paid to it, and the lymphatics of the urinary system least accurate of all. Lately we have been working on the genito-urinary lymphatic system, and there is an intercommunication between the two sides, back of the abdominal aorta, and the venae cavae, and if there is a communication between these two systems, there is no reason why the lymphatics cannot transfer from one-half of the body to the other a malignant growth. Why remove post-peritoneal glands from one side if it is possible to transfer malignant cells to the other. In my opinion, no one can go back of the peritoneal cavity and remove all the lymphatics following the removal of a testicle and hope to cure that patient by so doing. These cases should be radiated early, for as has just been shown, this type of cell is very amenable to radiation.

Kenneth D. A. Allen, M.D., Denver: I wish to subscribe heartily to Dr. Wasson's conservative advice for team work in treating cancer. Another point I would like to emphasize is the use of x-ray therapy in a diagnostic manner. Many tumors which cannot be biopsied for reasons presented by the essayist, can be diagnosed, or evidence can be gained toward diagnosis, by observing their response to a scout treatment of x-ray therapy. Another point is the effort to alleviate apparently hopeless cases of carcinoma which have metastasized. Nearly every case will have less pain.

F. R. Spencer, M.D., Boulder: I'd like to ask Dr. Wasson if some such classification of carcinoma, or other malignant tumors, as Dr. Broder has brought out is helpful. This classification has been a great help to otolaryngologists in classifying the amount of malignancy. We know patients are more likely to die with a very malignant type of tumor than if it is a mixed tumor and shows only a slight degree of malignancy.

F. B. Stephenson, M. D., Denver: There are four reasons for treating hopeless cancer patients radiologically:

1. Relief of pain, especially valuable in metastasis to the spine. It relieves excruciating pain very materially and often entirely.
2. Unusual and surprising results sometimes occur in apparently hopeless cases.
3. Retardation of growth and lengthening of life with a much more comfortable life period and good psychologic effect on the patient.
4. Healing of large, superficial, ulcerating, offensive, broken-down lesions, such as in breast cancer, the patient having an easier death from internal metastasis.

Dr. Wasson (Closing): The tumor problem is one that is very active and virulent at the present time. Some of us perhaps feel it more than others, but the general practitioner, the attending physician, sees these cases first. What is going to be his approach to that problem?

I tried in this paper to tell him how to approach the treatment of this case. His approach means everything to the patient. If he recognizes the case and places it in the proper hands, frequently he can save this patient not only a few months but many years.

THE PHYSICIAN LOOKS AT HIMSELF*

LORENZ W. FRANK, M.D.
DENVER

Once each year business firms take an inventory of their stocks in order to determine what they are worth and to search out those articles that are obsolete and unsalable. These methods might well be emulated by physicians and applied to themselves in a modified way. With increasing frequency we find articles in magazines and newspapers in which "the physician looks at crime," "the physician looks at marriage," or "the physician looks at economics." Therefore this might be an appropriate time for the physician to "look at himself"—to take stock of himself. His stock in trade is his services to mankind delivered in high-grade and efficient form in an ethical and professional manner. On every side we hear that there is something wrong with the practice of medicine and with the medical profession.

Due to the changed order of things and particularly during times of economic depression, we are accused of not meeting our problems and, if organized medicine does not meet the problems from within, adjustments will be made from without. Taking stock of ourselves reveals that our greatest need is concerted, harmonious, and earnest effort to solve the innumerable problems that confront us. I take this occasion to make a plea for help from each individual member of this society. These problems cannot be solved through resolutions presented on the spur of the moment, but will require much thought and planning on the part of each one of us. If the so-called public mass movement is going to necessitate a change in the practice of medicine, let us make this change ourselves in such a way that it will restore and keep the confidence of both the public and the profession in it. In the very nature of things our calling is an individualistic one and, in my opinion, this is its saving grace. We cannot and will not give up the ethical ideals that have been practiced for centuries by our predecessors.

On the other hand, few will deny that there is a new business in medicine and those few, who have not recognized it, will do so before the present depression is over. Even though this is the case, it is not beyond the realms of possibilities to reconcile our professional ideals with the newer economic adjustments.

In plain language, these newer economic adjustments mean a search for ways and means to reduce the cost of sickness. To a great extent the medical profession is held responsible for the high cost of being sick though their fees are essentially the same that they have always been and in times such as we are living in only a minor percentage of them are collected. A "Committee on the Costs of Medical Care," national in scope, was organized to study the economic aspects of the prevention and care of sickness, including the adequacy, availability, and compensation of the persons and agencies concerned. This committee, under the chairmanship of Dr. Ray Lyman Wilbur, included prominent representatives from almost all walks of life. They have completed a five-year survey and their conclusions on many phases of the subject are available in book and pamphlet form. The report is particularly significant since it covers a period of prosperity and a period of depression.

Based on data from this five-year study which shows the distribution of the nation's total medical bill of \$3,647,000,000 for the year 1929, they divide our medical dollar as follows: Physicians in private practice receive 29.9 cents; hospital, 25.5 cents; medicines, 18.2 cents; cultists, 3.4 cents; dentists, 12.3 cents; public health, 3.3 cents; nurses, 5.2 cents; all others, 4.2 cents. In publication No. 14 by C. Rufus Rorem and Robert P. Fischelis, they report that the annual bill for medicines in the United States is approximately \$715,000,000. This is nearly as large as the amounts spent annually for physicians or for hospitals. More than 70 per cent of the total expenditure for drugs and medicines is for self-medication. In pub-

*Presidential Address delivered before the Denver County Medical Society, January 3, 1932.

lication No. 16 by Louis S. Reed, it is shown that there are in this country 7650 osteopaths, 16,000 chiropractors, 2500 naturopaths and allied practitioners, and 10,000 Christian Science and New Thought healers. Each year the public spends \$125,000,-000 on these practitioners. He makes the comment that although these individuals treat the sick, they are not so well trained in the medical sciences as are doctors of medicine. While the results of these studies are perfectly obvious to physicians, they will also be of educational value to the public, coming as they do from non-medical sources.

The final report of the Committee is of the greatest importance to the medical profession. Among other things they recommend: 1. That medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician. 2. The Committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods. This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the present method. Cash benefits, i. e., compensation for wage loss due to illness, if and when provided, should be separate and distinct from medical services. In other words, State Medicine. The recommendations of a minority group composed of doctors and dentists does not agree with these.

The final report of the Committee is not only universally condemned by physicians, but it has drawn much adverse criticism from the press. Thus the Washington Star says, "If medicine is to be socialized, why not socialize food, clothing, rent, and fuel? Why not socialize education, lawyers, or

the clergy? It should not be forgotten that the American people are the healthiest people in the world and that their ordinary state of well-being, culture, and prosperity was achieved under what is traditionally known as the American system of civilization, not the Marxian system." The Boston Evening Transcript calls the report a flight of fancy which will add for the moment to interest in life. Thereafter, it is reasonably safe to predict this report, like so many others that created excitement upon their appearance, will find a place in a pigeon-hole, for the time is not yet, if it is ever to arrive, when more than passing notice will be given to proposals to put the Government into medicine on a scale that would tend to make medicine a Government monopoly. The Philadelphia Record thinks that the eminent Committee has spent a lot of time and money trying to answer this question, and has succeeded only in out-Wickershamming the Wickershammers.

Another problem in which the medical profession is vitally interested is the operation of free clinics and hospitals, federal, state and municipal health agencies and other more limited public health movements. We have an obligation toward and an interest in these agencies that we cannot shirk. They must be controlled and directed by the organized medical profession or they will be poorly administered from without to the detriment of all.

A progressive attitude is so well described in an editorial of the March, 1932, number of the *Annals of Internal Medicine* that I wish to quote a paragraph from it: "If State Medicine is not to come, if institutional practice is not to be more common than it is now, if charitable clinics and governmental medical agencies are not to continue their progressing encroachments, then the rank and file must not be content with this shifting of responsibility to their leaders, but must do their part as individuals. Open warfare against all clinics, good and bad, and social movements of various sorts whose objective is the care of the sick will not only be futile, but is certain to be detrimental to the entire professional body.

Charitable clinics, however much they permit abuses, however much they may impinge on the individual's practice, have a legitimate objective and were started with the best of intentions. Over-enthusiasm, sincere enough, and over-ambition on the part of a paid secretary, are usually responsible for the over-activity and the associated abuses. The individual doctor may do much through personal contact with his acquaintances and patients, who are members of lay boards. Properly approached they cannot fail to recognize that the doctor has an interest at least equal to their own in community welfare. It might be well to remind them that these clinics are dependent on the doctors for their very existence, and that the public is today asking the doctor to carry a disproportionate philanthropic load as compared with other individuals in the community."

One of the most urgent problems confronting us at this time is the ever increasing tendency toward contract practice beginning with the workmen's compensation insurance down through innumerable modifications of accident and health insurance. Most of these recent schemes purport to lighten the load of the so-called middle class during sickness or accident. Some of them are frankly insurance companies, others are hospital associations, some are contract practice schemes to serve certain specified groups, and even organizations within medical societies have been proposed, such as the Dr. Walter B. Coffey State Medical Society Plan in California. All of them intend to render medical service for a small yearly premium or fee usually for a limited time, but they provide little or no choice of physician and they invariably tend toward an inferior grade of medicine service.

There are some good and many bad features embodied in these varied schemes. An example is the Columbia Casualty Company Sickness Insurance. The Columbia Casualty Company is a subsidiary of the Ocean Accident and Guarantee Corporation of London, England. The scheme is proposed to extend over the groups of states on the Pacific coast and near by. Four grades of

protection are provided. The corresponding premiums vary from \$3.00 to \$10.00 per month. The service differs principally in regard to hospitalization. The cheaper grades furnish only general ward and floor nursing without drugs and medicines for a period of not more than six weeks. The highest class service provides the hospital care for twenty-six weeks with a private room at a rate not exceeding \$15.00 per day with whatever nursing service and whatever drugs and medicines may be prescribed by the surgeons or hospital. The other grades of service provide care midway between these two. The medical groups are selected to cover specific territories and the contract is made with the group.

Another example of a new form of medical practice is that of the Los Angeles Record. The Record now offers to its subscribers—old and new—medical service in every need, either at reduced rates or for \$1.33 per month, paid regularly while you are in good health. Your subscription to the Record for one year, plus \$1.00 registration fee, is the sole requirement for membership in The Record Health Service League. Is this a punishment or a retaliation for the non-advertising policy of the medical profession? There may be some good features incorporated in these health insurance schemes, but manifestly most of them are organized for the financial gain of their promoters. It is barely possible that the enthusiasm of the proponents of health insurance may limit or remove the menace for the medical profession on purely financial grounds. Many life insurance companies have eliminated the disability clause from their policies.

In an address entitled "Ominous Abuses Threatening the Insurability of Workmen's Compensation," F. Robertson Jones, General Manager of the Association of Casualty and Surety Executives, says: "Unless some drastic action is taken soon to bring the Workmen's Compensation laws of this country back to a status of reasonableness and to correct the many abuses incident to their administration and enforcement, I am

fearful that there will be a complete breakdown of the whole system (including insurances supporting it) so laboriously developed during a period of over twenty years." He continues: "How to deal with the deadly abuse of the medical benefits is a problem of which I am unable to offer any solution. It is an unsolved problem everywhere that compensation insurance covers unlimited medical benefits. And it is just about as far from a satisfactory solution under the principal European state system of health insurance." He concludes: "Let's get back to first principles."

Another urgent problem requiring immediate consideration is the number of medical graduates. The graduates of medical schools in the United States for the fiscal year ending June 30, 1931, numbers 4,735. Deducting the number of physicians whose obituaries were published, there was a net addition to the ranks of the profession for the year of 1,783. There is an evident over-production of medical men. The world's supply of doctors is one doctor to 2,070 people. In the United States there is one to 789 people. Dr. B. T. Beasley of Atlanta, Georgia, offers the following suggestion: Require medical colleges to reduce the number of graduates 25 per cent each year until a ratio of one doctor to 2,000 population is reached. This suggestion may be too drastic, but some limitation approaching a balance between supply and demand is certainly indicated.

The medical profession is not demanding anything that is unreasonable; we have patiently borne many kinds of class legislation which would bring a storm of protest from other members of the body politic. But we do feel that in the light of past accomplishments, if for no other reason, we are entitled to practice our profession in peace without outside interference for a fair and reasonable compensation.

EARLY DIAGNOSIS

MILD COMPRESSION FRACTURES OF THE SPINE

HAMILTON I. BARNARD, M.D.
DENVER

With the ever increasing number of recognized compression fractures of the body of the vertebrae, and with the necessity of making a definite and early diagnosis, all must be on the alert for the mild compression



Fig. 1. Showing slight narrowing of second lumbar vertebra.



Fig. 1A. View taken with small focal spot tube. A definite line of compression is shown through the body of the second lumbar vertebra.

sion fractures, particularly the type in which there is no evidence of any cord or nerve injury. With the state compensation and liability insurance so closely related to these injuries, and with every case a potential court case, it is quite important to rule in or rule out a compression fracture. Even with our modern equipment, a considerable number is overlooked.

Certain types of injuries should always warn us of such possibility. A few clinical symptoms and signs should suggest to us,

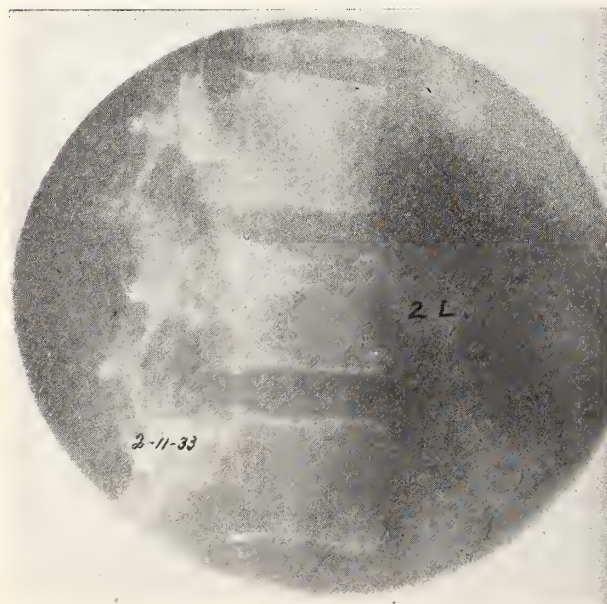


Fig. 2. Taken after five weeks, showing callus formation through line of compression.

and proper series of x-ray should finally determine for us, the presence of a compression fracture. The types of injuries are jack-knifing of the body as through the fall of a heavy load on the head and shoulders; striking the head up against the top of a car while in the sitting position, as in certain automobile accidents; or the jumping or falling from a considerable height and landing on the feet with the knees extended. Following any of these accidents, if the patient has any of the following symptoms: localized percussion tenderness, pain in the back, muscle spasm, weakness, restriction of motion,

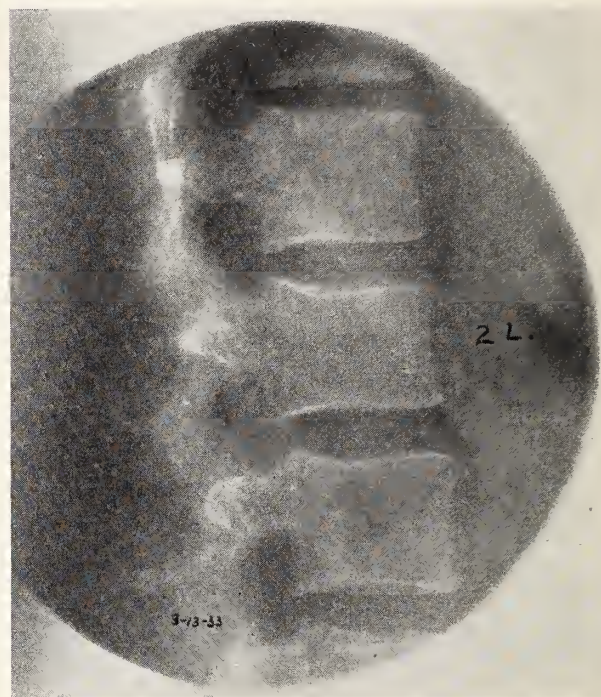


Fig. 3. Showing reconstruction of the area two and one-half months after injury. Vertebral body is normal except for slight narrowing.

abdominal distension or distress, he should be kept in bed until we are certain there is no compression fracture. Unfortunately the diagnostic signs of fractures of long bones, that is, deformity, crepitus, unnatural mobility and ecchymosis, are not present. Then the final judge is the x-ray. Quoting from a roentgenologist:

"The spine is deeply situated in the body and therefore requires unusual radiographic skill and carefully selected x-ray apparatus to permit the rendering of an opinion of "negative" from the evidence evinced on the x-ray plate following an injury to the spine. Each vertebral body upon which opinion is given must be visualized with the surfaces and borders presented in clear relief in both the antero-posterior and lateral plates, the

latter preferably stereoscopic. This can only be accomplished by establishing the proper distance and proper tube slant according to the type.

"The discovery of a traumatic derangement of bone structure constituting a small but complete compression fracture such as that shown in the figures illustrating this article requires the recognition of type and use of the corresponding technic. A good Bucky diaphragm and an x-ray tube of high power capacity but with a focal spot $5/64$ of an inch or smaller are other requisites. Still another factor is a complete immobilization of the patient. This is best obtained by making the patient comfortable and supported by ten to fifteen sandbags.

"Any vertebra which appears at all suspicious in the original plates of the entire lumbar spine should be studied in more detail by the use of a small cone which isolates the vertebra in question." (Figs. 1, 2, and 3.)

The case which I present is of a patient who received injury to his back while riding in an automobile, the force being indefinite and with very few symptoms immediately following. He did have some pain in the low back, particularly in the sacro-iliac joint, the first few days, with pain on percussion over the second and third lumbar vertebrae, a little weakness and very slight muscle spasm. But after few days these symptoms became more noticeable and to them was added abdominal distension and distress. At no time was there evidence of cord lesion, any deformity in the back or any evidence of contusion of the soft tissue. X-rays* taken immediately, Figs. 1 and 1A, showed very slight narrowing of the second lumbar vertebrae and with a small focal spot tube showed a definite line through the body, which was very suggestive. Further check x-ray, Fig. 2, after five weeks showed a definite compressed line with definite callus formation, and finally, Fig. 3, reconstruction of the area so that the bone structure was practically normal excepting for the slight narrowing, still present. Therefore, in all cases of questionable back injury, careful physical examination and diagnostic lateral x-ray views should be made of the questionable areas. These procedures should be instituted without delay. Proper early treatment will alleviate deformity, possible cord injury, and subsequent disability.

*The x-rays and x-ray technic are given through the courtesy of the Presbyterian Hospital.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Many believe that the future control of contagious disease lies largely in prophylactic vaccination, and all over the world, efforts are being made to discover vaccines. Concerning these, when they are discovered, as well as for those for which vaccines are already known, there must be given to the public information accompanied by advice which may be so urgent as to partake somewhat of the character of compulsion. How should such a campaign be carried out? The highest success has been attained by enlisting the aid and cooperation of the family physician—in other words, the clinician. It is a matter of wisdom for the health officer to keep in close touch with those who reach the largest proportion of the population, to consult with them, and to accept their advice. Any antagonism which may be aroused seriously injures the cause which the health officer has at heart, and may result in a large degree of failure, not only for that particular scheme, but for others of like character elsewhere.—Editorial, *American Journal of Public Health*, May, 1933.

Important Advances in Public Health Recorded During 1932

Important advances were made in every field of science during 1932.

1. Demonstration that tooth decay is caused by inadequate calcium, phosphorus, and vitamin D, and further discoveries of the chemical nature of vitamins.

2. A toxoid injection which will build up resistance to scarlet fever, and also a concentrated and purified toxin for use in preparing the toxoid, were developed by the U. S. Public Health Service.

3. Immunity to yellow fever is made possible by a new method, making use of mouse serum, reported Drs. T. P. Hughes and W. A. Sawyer of the Rockefeller Foundation, New York City, who have also devised a test for the effectiveness of the protection.

4. Experimental evidence that virus dis-

eases of plants and animals are caused by a non-living chemical substance analogous to enzymes was reported by Dr. Carl G. Vinson of the University of Missouri.

5. The common cold lasts only three or four days and gives immunity for three months, longer illnesses being due to secondary infections, Dr. Wilson G. Smillie, Harvard, reported.

6. Inhaling carbon dioxide relieves whooping cough, Professor Yandell Henderson of Yale reported.

7. Vaccine promising to give immunity to endemic typhus fever was developed by Drs. R. E. Dyer, W. G. Workman, A. Rumreich, and L. F. Badger, U. S. National Institute of Health.

8. That lack of phosphorus and vitamin D in the diet is the chief cause of dental decay was reported by Dr. R. Gordon Agnew of West China Union University, whose results bear out those reported last year by Dr. E. V. McCollum and associates of Johns Hopkins University.

9. Discovery that murrina, fatal horse disease, is transmitted by the vampire bat, marking the third instance of a mammal being a disease-vector, was reported by Dr. H. C. Clark, director of the Panama laboratories of the Gorgas Memorial Institute, where the discovery was made.

10. Infantile paralysis is contracted from a germ or virus entering through the membranes of the nose and passing along the nerves of smell to the brain and spinal cord, it was concluded by Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research.

11. Infantile paralysis occurs repeatedly in the same families, indicating a possible hereditary factor, reported Dr. W. Lloyd Aycock of Boston.

12. The germs of typhus fever and of spotted fever, though much alike, grow in different parts of the cells they invade, Dr. Henry Pinkerton of Peter Bent Brigham Hospital, and Dr. G. M. Hass of Children's Hospital, Boston, reported.

13. Mosquitoes may carry tularemia, scientists of the U. S. Public Health Service found.

BOOK REVIEWS

Urine and Urinalysis, by Louis Gershenfeld, Ph.M., B.Sc., P.D. Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Illustrated with 36 engravings. Lea & Febiger, Philadelphia. 1933. 272 pages, price \$2.75.

This treatise is intended for graduates in pharmacy, chemistry, bacteriology and allied professions, the nursing profession, technicians, as well as for practitioners in medicine. Although the author does not possess a medical degree, he has managed fairly satisfactorily with the clinical aspects of urinalysis.

The reviewer read with interest the historical phases of the development of urinalysis not generally seen in this type of treatise.

Quantitative methods of determining total nitrogen, creatinine, uric acid, etc., of the urine have been excluded from the book because their determination is, in the opinion of the author, of little or no practical clinical value.

The original and the Friedman modification of the Aschheim-Zondek test are described. The latter has been erroneously spelled in the book with one "h."

It seems that tests for the presence in the urine of certain drugs occasionally found therein should have been included. Likewise, no mention is made of trichomonas which, when found in the urine, will point to the advisability of a vaginal examination in which organ they produce a distinct disease entity.

The illustrations consist mostly of line drawings, which, though recognizable to the informed, are rather difficult of interpretation on the part of the beginner. This difference will be appreciated when line drawings are compared with reproductions of actual fields of casts as found in one well-known treatise on the subject.

The book contains some handy tables such as the one on variation in color of the urine on p. 48, and the one on abnormal and pathological constituents of urine on p. 73.

The reviewer would have liked to have seen a resume or table of the pathologic findings in the various renal, bladder and urethral disease conditions included in the book.

The author recommends decanting the supernatant urine after centrifugalization when preparing for a microscopic examination. The reviewer feels that removal of the sediment with a suitable pipette is likely to cause less disturbance of the sediment and diminished loss of sedimentary constituents.

The description of the bacteriologic examination of the urine both culturally and by stained smears is inadequate, no inclusion being made of special types of culture media for isolation of colon and typhoid bacilli and no exact staining technic being given of the commoner microorganisms found in the urine.

It seems that this book is less suitable for the medical practitioner than it is for the others mentioned above. It is well printed, has a flexible cover, and is well indexed.

OTTO S. KRETSCHMER.

Calcium Metabolism and Calcium Therapy. By Abraham Cantarow, M.D., Instructor in Medicine, Jefferson Medical College; in Charge of Laboratory of Biochemistry, Jefferson Hospital; Assistant Physician Philadelphia General Hospital. With a Foreword by Hobart Amory Hare, B.Sc., M.D., LL.D. Late Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia. Second Edition, Thoroughly Revised. Philadelphia: Lea and Febiger, 1933. 252 pages. Price \$2.50.

In this book of 214 pages the author systematically summarizes and correlates the extremely numerous articles concerning his subject which have appeared in various journals in recent years. Many articles are analyzed, some criticised adversely, and the many gaps in knowledge in this field are pointed out. An attempt is made throughout to indicate the most generally accepted opinion on controversial points; this is colored, of course, by the thought of the writer.

The most significant point in the book seemed to me to be the emphasis placed upon the important part played by calcium in vital cellular processes and upon the probability that all types of tetany, of whatever etiology, are due in the ultimate analysis to a lessened concentration of calcium ions in the blood and especially in the tissue fluids.

The list of chapter headings indicates the logical outline under which the author considers his subject.

An extensive bibliography is given. The book gives in brief form much significant information concerning a body constituent which plays an interesting and obviously very important part in the body economy.

PAUL A. DICKMAN.

Wheat, Egg, or Milk Free Diets. By Ray M. Balyeat, M.A., M.D., F.A.C.P., Associate Professor of Medicine and Lecturer on Diseases Due to Allergy, University of Oklahoma Medical School; Chief of the Allergy Clinic, University Hospital; Consulting Physician to St. Anthony's Hospital and to the State University Hospital; President of the Association for the Study of Allergy, 1930-1931; Director, Balyeat Hay Fever and Asthma Clinic, Assisted by Elmer M. Rusten, M.B., M.D., Chief of Section Dermatology, and Ralph Bowen, B.A., M.D., Chief of Section Pediatrics. 149 pages. Price \$3.00. Philadelphia, Montreal, London: J. B. Lippincott Company.

This is a book written for the layman and dietitian. It tells briefly the role played by food in the allergic diseases such as asthma, hay fever, migraine, urticaria, eczema, and certain other diseases in which the pathology is partly due to allergic causes, such as epilepsy, arthritis, pruritis, cystitis and certain gastro-intestinal disorders. The methods of testing for food sensitization are given.

The authors emphasize the fact that in patients who are sensitive to wheat, eggs, or milk, a great deal of difficulty has been encountered in removing them from the diet. As a consequence, they have devoted nearly one hundred pages to recipes in which one or more of the three foods above mentioned are avoided. The result has been practically a cookbook of egg, wheat, or milk free diets.

ARNOLD MINNIG.

Chinin In Der Allgemeinnpraxis. Unter Berücksichtigung Pharmakologischer Befunde. Ein Nachtrag Zu der 1930 Erschienenen Ausgabe von Dr. Med. Fritz Johannessohn. Mannheim. Bureau Tot Bevordering Van Het Kinine-Gebruik. Amsterdam—W. 1932. 176 pages.

These publications comprise an authoritative review of the history, pharmacology, and therapeutics of quinine and its derivatives. The authors give a wide range of use of the drug. As a reference it is worth a place on the shelf of the practitioner.

G. HEUSINKVELD.

Medical Clinics of North America. (Issued serially one number every other month.) Volume 16, No. 4. (Boston Number—January, 1933) Octavo of 256 pages with 33 illustrations. Per Clinic Year July, 1932, to May, 1933. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

This number of the clinics comes from Boston and presents a well balanced discussion of most all fields of internal medicine. Chronic Dietary Deficiency is presented in an interesting way in connection with old and common symptoms. Cardiac and blood vessel diseases are given greatest prominence. There are clinics on Aortic Stenosis, Thrombosis in the Abdominal Viscera, Thoracic Aneurysm, Subacute Bacterial Endocarditis, Nitroglycerin Collapse, Cardiac Edema, Coronary Occlusion, Cardiac Asthma, and Electrocardiographic Observations in Diphtheria. The clinics dealing with infection are on Mumps, Meningo-Encephalitis, Acute Arthritis, Agranulocytic Angina, and Actinomycosis. There are two clinics on Goiter Problems and one on Ulcerative Colitis. There is one clinic on Psychological Maladjustment. Three outstanding clinics on diabetes are especially worthy of mention; the one on treatment is practical and clearly stated.

Medical Clinics of North America. (Issued serially one number every other month.) Volume 16, Number 5. (Baltimore Number—March, 1933.) Octavo of 257 pages with 16 illustrations. Per clinic year, July, 1932, to May, 1933. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The Baltimore number contains as usual a most interesting and diversified group of clinics, beginning with a clinic on Multiple Myeloma and ending with one on Status Thymicolymphaticus. There are interesting discussions on a variety of conditions, notably such subjects as The Functions of the Stomach as Influenced by Diseases of other Organs and their Interrelationship, and Chronic Diarrheas. Of especial interest is a case report and a discussion of The Eastern Type of Rocky Mountain Spotted Fever. This disease as shown by its symptomatology, the nature of its vector, and in the type of immunity produced is closely affiliated with or identical with the Rocky Mountain Spotted Fever which seemed to have been confined to the Rocky Mountain region.

LORENZ W. FRANK.

(Continued on Page Sixteen, Advertising Section)



SILAS WEIR MITCHELL

(Continued from June Issue)

Dr. Mitchell's historical romances deserve a place in literature, because they are based on facts and accurately describe incidents around which they were written. For instance, "The Youth of Washington" is authentic in its historical details. The story is written in the form of an autobiography and conveys to the reader an impression that one is browsing through the pages of an old diary. It contains the charm and personality of Washington.

Weir Mitchell was at home in the literature of the world and was a man of wide culture, a skillful and accomplished novelist, using almost every form of literary expression including prose and verse. He has been spoken of as the "Dean of American novelists."

Speaking at a dinner of the alumni of the University of Pennsylvania in 1912, he said, "What you have said of me as a scientist and physician, and as a writer of fiction and verse obliges me to be personal. When success in my profession gave me the freedom of long summer holidays, the despotism of my habits of work would have made entire idleness an ennui. I turned to what, except for stern need, would have been my lifelong work from youth—literature—and

bored by idleness, wrote my first novel. There is a lesson for you; never be idle.

"In any land but this, such an experiment as a successful novel would have injuriously affected my professional career of a medical consultant, or so I was told by an eminent English physician. I need not say this is not the American way of looking at life. If you give your best to medicine and the law, you may write novels or verse, or play golf, or ride the wildest colt of hobbies."

At the age of 56, S. Weir Mitchell was well launched on a career as a writer. The Century Magazine mentions that he studied seven years preparatory to writing "Hugh Wynne." Dr. Mitchell has been cited as a good example of the best versatile mind in the nineteenth century. He has been compared with Leonardo da Vinci of Italy in the fourteenth century, Albrecht von Haller of Germany in the eighteenth century, Goethe and Ruskin in the middle of the nineteenth century, and Oliver Wendell Holmes, his contemporary.

From the bulk of Dr. Mitchell's writings, one marvels how he could give adequate attention to his extensive medical practice, although he never permitted literary work to interfere with his professional duties. It has been said by Owen Wister that Dr. Mitchell never talked about the sacredness of labor, but only the joy of doing it.

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

State Program to Appear in Next Issue

WATCH for the program of our State Meeting in the August issue of Colorado Medicine.

The Committee on Scientific Work is completing its task of program arrangement just as this, the July issue, goes to press. Last month we published the skeleton schedule, showing how innovations this year will eliminate the need for a night meeting of the House of Delegates preceding the general meeting, yet allowing ample time for all regular features of the session. Refer again to that statement, on Page 238 of the June issue, especially if you are a delegate or alternate, and familiarize yourself with the new plan.

Every doctor has had his own special difficulties this year, in addition to those economic backsets common to all. Every doctor needs that combination of pleasant vacation and stimulating post-graduate work which the Colorado Annual Session provides. We can promise that the program and the arrangements this year will be up to every standard, above standard in many respects.

Let nothing interfere with those dates—Thursday, Friday and Saturday, September 14, 15 and 16, 1933. Colorado Springs is the host city. Need more be said?

Colorado May Well Be Proud

COLORADO maintained her enviable reputation for support of American Medical Association sessions at the recently concluded meeting in Milwaukee. Despite hard times, she sent a larger delegation than for many years past. Despite her small medical population in proportion to the whole country, she was well represented on the scientific program.

Forty-two Fellows of the A.M.A. registered from Colorado, many accompanied by their families. Papers were read before the sections by Drs. Edward Jackson, William H. Crisp, Claude E. Cooper and H. J. Corper, and other Coloradans took active parts in the discussions. No doubt the proximity of the Chicago World's Fair did much to stimulate attendance not only from Colorado but from all parts of the country, but none the less A.M.A. officers were pleasantly surprised by the total registration of more than

4,600 Fellows and the total attendance of something like 8,000. Milwaukee as a city and her medical profession as represented by the county and state societies did themselves proud in general arrangements and entertainment for the convention.

Those registered from Colorado as Fellows of the A.M.A. were:

J. W. Ames, Denver; John Andrew, Longmont; Hamilton I. Barnard, Denver; H. B. Beeson, Colorado Springs; V. H. Brobeck, Colorado Springs; T. E. Carmody, Denver; K. S. Chouke, Denver; Claude E. Cooper, Denver; Kemp G. Cooper, Denver; H. J. Corper, Denver; George K. Cotton, Denver; W. H. Crisp, Denver; C. H. Darrow, Denver; Crum Epler, Pueblo; A. L. Esserman, Denver; W. C. Finnoff, Denver; Roy P. Forbes, Denver; Philip Hillkowitz, Denver; Edward Jackson, Denver; J. R. Jaeger, Denver; George S. Johnson, Denver; Wiley Jones, Denver; Maurice Katzman, Denver; F. O. Kettelkamp, Colorado Springs; May B. Kruse, Denver; G. W. Larimer, Salida; Ray R. Lowther, Denver; R. F. Maul, Denver; C. W. Maynard, Pueblo; W. L. McBride, Seibert; E. E. McKeown, Denver; D. G. Monaghan, Denver; W. A. Ohmart, Denver; J. J. Pattee, Pueblo; C. W. Reed, Grand Junction; C. A. Ringle, Greeley; Frank B. Stephenson, Denver; E. L. Timmons, Colorado Springs; Virginia C. Van Meter, Denver; E. C. Webb, Canon City, F. E. Willett, Steamboat Springs; Hubert Work, Denver.

Malpractice Insurance Premiums Increased

BY THE time this issue of the Journal reaches its readers, most of them will already have been informed by their insurance companies of the increase in malpractice insurance premium rates which are taking effect July 1, 1933.

Members of the State Society generally will be keenly disappointed to learn that hereafter they must pay more than in the past for this vital protection against malpractice claims. Many may be angered at the insurance companies in the feeling that of all times, a period of depression is the wrong time to increase costs.

It is perhaps small comfort to point out that the increase is necessary, that officers of the Society have been expecting it momentarily over a period of several years, that we in Colorado have been extremely fortunate in not having felt

the increase ere this. But all these things are true. It is too much to expect that an insurance company can continue to charge \$12.50 a year for policies that have actually cost the company twice as much in actual "out-go" for several years.

Your Executive Office is informed that the excellent work done by the Committee on Medical Defense has been primarily responsible for delaying the increase in premium rates. For this we are thankful, and for this the thanks of every member is due to the Committee.

Insurance executives tell us privately that, in the last analysis, doctors themselves must assume whatever responsibility for the increase is not directly traceable to the economic conditions of the times. Almost every malpractice claim, their records show, has had its inception in criticism of a doctor by one or more of his colleagues, criticism usually thoughtless or careless, but too often criticism born of personal animosity.

Thus it develops that continuance of the new higher rates will depend very largely upon the attitude of our Colorado profession, both individually and collectively. Greater care on the part of physicians and individuals when discussing treatment of a patient by a colleague, greater care in avoiding the unjustified criticism that a patient uses as the basis of a suit, greater unity of organization and closer cooperation in defeating the many claims and suits that have no fair foundation and amount to little better than extortion—these may in the not too far distant future bring malpractice premium rates back down.

In the meantime, while rates for members of the State Society have increased, those for non-members are still higher. The man who keeps himself in good standing in the Medical Society still gets his malpractice insurance cheaper than can anyone else. The reduction for all but the smallest policies amounts to more than the medical society dues.

At the request of the Aetna Life Insurance Company, which insures a large majority of the members of the State Society, we are appending a statement issued by the Company in further explanation of this new situation, as follows:

The increasing hazard to the physician in the practice of medicine and surgery has brought about a constantly increasing number of claims and suits, which condition has caused the Insurance Companies to either discontinue the writing of malpractice insurance or materially increase the rates in many sections of the country. It follows, of course, that the conditions that make this form of insurance more costly and more hazardous to the insurance companies make the protection of such insurance more desirable for the doctor.

The Aetna Life Insurance Company has been writing a large number of the members of the Colorado State Medical Society for the past eighteen years at a very low rate, but the matured results indicate the necessity for a material increase in the rate for this form of insurance at this time.

Until about three years ago the results of the administration of this insurance in Colorado were fairly satisfactory but owing to changed economic conditions the costs have been continually mounting, and even when cases are won the expenses are considerable, with the result that over the entire period the company has paid out more money than it has taken in. Obviously this condition cannot continue, and it is with the expectation of at least securing an even break on future business, that a higher rate of premium is to be charged.

Malpractice insurance is very reasonably priced, and no other form of insurance provides so much protection for the premium charged. It provides a bulwark against monetary loss resulting from claims for alleged malpractice, and relieves a doctor from worry over the attacks of unscrupulous attorneys or ungrateful patients who assail the doctor's integrity. The Aetna takes the position that it is absolutely necessary to provide the very best legal defense against claims and suits, to the end that illegitimate claims may be prevented and defeated. No doctor should be without malpractice insurance, and he should also see that the financial condition of his insurance company is such that there will be no question of its being able to meet its obligations, even though it takes years for them to mature, as it often happens that several years will elapse between a doctor's treatment of a patient and the date of bringing suit, and its final disposition. A doctor's reputation being his "stock in trade," it behooves him to protect it as far as possible with adequate and reliable malpractice insurance.

MEDICAL SOCIETIES

COLORADO OPHTHALMOLOGICAL SOCIETY

May 20, 1933

DR. O. C. WISE, PRESIDING

A case for diagnosis: Dr. F. J. Pierce (by invitation) presented a case of unilateral edema of the disc and surrounding retina of uncertain etiology. Diagnosis of incomplete inflammatory thrombosis in the optic nerve was considered.

Interstitial keratitis; negative Wassermann, positive Kahn: Dr. R. W. Danielson reported a case of interstitial keratitis in a 16-year-old girl, in whom the blood Wassermann was repeatedly negative and six types of flocculent tests including the Kahn were positive. No other signs of syphilis were found, but the condition responded promptly under antileptic treatment, with the resulting corrected vision to date of 20/30. The father and a sister had a positive Kahn; another sister was negative; the mother was dead, cause unknown.

Intraocular tumor: Dr. E. M. Marbourg presented a married man, aged 30, in whom there was a complete detachment of the retina and glaucoma. The symptoms were very significant of intraocular tumor, and enucleation was advised.

Benzylaldehyde poisoning resembling methyl alcohol poisoning: Dr. G. H. Stine reported a case of benzylaldehyde poisoning in a young man, aged 21. The symptoms of multiple neuritis, headache, nausea and vomiting, weakness, blurring of vision, marked concentric contraction of the visual fields with central scotoma for green, and diplopia developed a few hours after drink-

ing cocktails made of synthetic almond extract and homemade apricot brandy. Three other members of the drinking party, two women and one man, were dead within twenty-four hours after drinking the mixture. The eye grounds were essentially normal. Although the symptoms completely resembled those of methyl alcohol poisoning, no wood alcohol (or hydrocyanic acid) was found at autopsy or in the liquor. Under elimination, spinal drainage and supportive treatment there was steady improvement in all the symptoms up to date.

Pulsating exophthalmos and ligation of the common carotid with recovery: Dr. G. H. Hopkins reported further notes on the case of pulsating exophthalmos following fracture of the skull, in which ligation of the common carotid had given complete relief, with recovery of vision to normal. He also reported further on a case of exophthalmos in which a diagnosis of hyperthyroidism had been considered. The condition had now subsided.

Ligation of the right internal carotid artery for pulsating exophthalmos: Dr. J. J. Pattee reported on the progress of a case of pulsating exophthalmos originally presented to the society by Dr. J. W. Thompson, in which ligation of the right internal carotid artery was followed by marked improvement.

Renal detachment and choroidal tuberculosis: Dr. C. E. Earnest presented a case of extensive retinal detachment which was probably due to choroidal tuberculosis. There was general active tuberculosis of both lungs. General and local treatment was followed by some improvement in the general condition, but progression of the retinal detachment.

Congenital cataracts—discission: Dr. G. H. Hopkins presented a case of congenital cataracts in a six months old baby. The patient was apparently normal in all other respects. Discission of the left lens was made. There had been considerable absorption of the cortex, but the nucleus was now protruding into the anterior chamber. It was planned to repeat the operation if no further absorption of the lens occurred.

Detachment of the retina: Dr. G. H. Hopkins presented a case of bilateral extensive detachment of the retina of three years standing, probably due to retinochoroiditis, in a woman aged 25. The patient was now pregnant and a question arose whether abortion was indicated should further loss of vision occur.

Extreme cicatricial contraction of the lids following deep burns—Thiersch grafts: Dr. C. E. Earnest reported a case of a male Mexican in which severe gasoline burns had caused marked retraction of the lids, severe involvement of both ears, face, head and hands. There was active keratitis in the left eye from exposure. Seven operations consisting of skin transplants with Thiersch grafts restored normal lid function in both eyes.

Congenital amblyopia; optic atrophy: Dr. O. C. Wise reported a case of congenital amblyopia in a man, aged 45. There was some involuntary spasm of the orbicularis oculi, coarse mixed nystagmus, high hyperopia, and optic atrophy. In spite of the very poor vision, this man had been able to hitch-hike to Texas four times by himself. His father and mother were first cousins. One living sister had the same eye condition; four other sisters had died of diabetes between the ages of nine and eighteen years.

Superficial linear keratitis: Dr. O. C. Wise presented the case of a 37-year-old man who gave the history of working in intense heat in a zinc

smelter, and of failing vision since February, 1933. Since then there had been at least three attacks of corneal inflammation. In both corneas there were lattice-like infiltrates with faint nodules in the superficial cornea. The condition very much resembled corneal dystrophy or superficial linear keratitis. Local treatment and K. I. by mouth was followed by a subsidence of the inflammation. The vision was 20/200 in each eye.

Intraocular foreign body: Dr. J. W. Thompson reported a case of metallic intraocular foreign body in a garage mechanic, aged 42. Many attempts at magnetic extraction failed, but the inflammation of the eye had gradually quieted down regardless. There were many vitreous opacities, but the patient could count fingers at twelve feet and the vision was slowly improving.

Multiple iron ore deposits: Dr. C. E. Earnest reported the case of a man, aged 29, who in a premature dynamite blast received many ferric oxide foreign bodies in the face, hands, and eyes. Both corneas had been perforated, and the lower three-fifths of each cornea was badly scarred from the foreign bodies. There were also traumatic cataracts. A peripheral iridectomy above was done in the right eye, and later the cataract was needled. Three months later the vision of the right eye with correction was 20/15, this restoration of vision being maintained to date. The left eye was blind.

New instruments: Dr. H. C. Rusk exhibited a simple loupe which permitted the surgeon the use of both hands and good stereoscopic vision. He also showed plus and minus 0.25 D. spheres attached to the same handle for securing simultaneous contrast in determining the exact spherical refraction.

GEORGE H. STINE,
Recorder.

Obituary

Nictor Theodore DeWar

What gave promise of being a very brilliant medical career was cut short on May 25, when the airplane owned and piloted by Dr. V. T. DeWar crashed on James Peak. Dr. DeWar had made the trip to Denver that morning and it was during the return trip to his home in Grand Junction in the late afternoon that the accident occurred. In the same accident Mrs. DeWar and Mr. and Mrs. Harold Stevens lost their lives. Dr. DeWar had been active in aviation ever since coming to Grand Junction, first organizing a glider club, and in April, 1932, purchasing a four place Stinson monoplane. He had made repeated flights to Denver, last summer flying as far east as Chicago.

Dr. DeWar was born in Door County, Wisconsin, March 9, 1902. His parents were Mr. and Mrs. Alex Dewarzeger of Green Bay, Wisconsin. He obtained his A.B. degree at the University of Wisconsin. He was graduated from Northwestern University with the degree of Doctor of Medicine on June 20, 1927. He externed at Cook County Hospital, later taking a year's internship in Colorado General Hospital. He was married to Miss Lucille Garot, September 16, 1925. There were no children.

After finishing his internship in Colorado General Hospital, Dr. DeWar located in Grand Junction and took up general practice. Because of

his fine personality and excellent medical judgment his practice enlarged very rapidly. Dr. DeWar was an Elk and took an active part in the local Rotary organization. He is survived by his father and mother and two sisters, to whom we extend our sincere sympathy. H. M. T.

WOMAN'S AUXILIARY

Of interest to the readers of the Auxiliary's columns are the following notes of the national meeting held in Milwaukee the week of June 12, and others concerning other auxiliaries throughout the United States. Further news of the national meeting will appear at a later date when a more detailed report will have been received.

An "In Memoriam" service on Tuesday, June 13, with a special tribute to our beloved late President, Mrs. Walter Jackson Freeman, was in the hands of Mrs. A. S. Kech, Pennsylvania's capable and efficient State President.

The Auxiliary luncheon on Wednesday had as honor guests, Drs. E. H. Cary and Dean Lewis, President and President-elect of the A. M. A., bringing greetings, and Dr. Junius B. Harris, Past President and for many years legislative chairman of the California Medical Association, speaking on "The Technic of Following a Bill Through the Legislature," illustrated by a chart of his own devising.

On Thursday morning, the incoming President, Mrs. James Blake, who radiates warmth of personality and genuine understanding and comprehension of our problems, gave the outline of her policies for the coming year and the personnel of our new board, besides taking a part in the general discussions which are the life-blood of any progressive organization.

The social events were a dance at the Wisconsin Club held on Tuesday night, of which the Wisconsin State Medical Society and the Auxiliary were hosts; and on Thursday night was a "Bring Your Husband" dinner at the Hotel Pfister, the Auxiliary Headquarters, preceding the President's reception and ball at the Schroeder Hotel. There was a colorful cabaret during the dinner provided by the International House Artists, each number put on by a different nationality in the costumes of their native lands. All of which makes us unfortunate absentees realize we missed a great deal at this meeting.

Some interesting items from other state auxiliaries are as follows:

In Alabama there has been an increase of 90 per cent in membership which now exceeds 200.

The Pima County, Arizona, Auxiliary, provided medical treatment to all children needing it in one of the large schools in Tucson where the enrollment is 100 per cent Mexican.

Members of the Auxiliary to the Richardson County Medical Society of Nebraska have designed and completed a kit acceptable to and accepted by doctors working on charity cases during the winter.

The following report was received from Mrs. P. J. McHugh, publicity chairman of Larimer County:

Closing the year's meeting of the Woman's Auxiliary to the Larimer County Medical Society, a garden party was held at the home of Dr. and Mrs. Roy L. Gleason for members of the society and auxiliary, after which the doctors went to

the veterinary laboratory at the college for their business meeting.

Mrs. Victor E. Cram, president of the auxiliary, presided at the auxiliary meeting and introduced Mrs. Frank Carroll, the program chairman. Dr. Robert M. Lee showed moving pictures of historic buildings in Philadelphia, scenes in Fort Collins and of the sport of skiing. Mrs. W. P. Gasser of Loveland played some piano solos. Mrs. G. P. Lingenfelter of Denver, president-elect of the state Auxiliary, told of the plans for the society's work. Mrs. J. B. Ambler of Denver was also a guest.

COLORADO NEWS NOTES

DENVER—The following members of the State Medical Society participated in the progress of the Congress of American Physicians and Surgeons held in Washington, D. C., May 7 to May 10 last: Drs. Casper F. Hegner, T. D. Cunningham, G. W. Holden, James J. Waring, C. E. Sevier, Leonard Freeman, Sr., and Leonard Freeman, Jr., of Denver, and Drs. J. A. Sevier and G. B. Webb of Colorado Springs.

DENVER—Dr. T. E. Carmody and Dr. W. H. Crisp of Denver attended the meetings of the examining boards of the American Otolaryngological and the American Ophthalmological Societies, respectively, which convened in Chicago during the first week in June.

DENVER—Dr. J. W. Ames, Denver, delivered the Commencement address at the Nurses Training School, Corwin Hospital, Pueblo, on May 25.

DENVER—Dr. James R. Arneill of Denver visited friends and relatives in California from May 26 to June 5.

DENVER—Dr. A. L. Beagler of Denver presided at the annual meeting of the Western Section, American Public Health Association, convened at Pasadena in May. The Doctor was pleasantly surprised, at the conclusion of this conference, to receive the annual award of the Ling Medal for notable contributions to Child Hygiene during the current year.

DENVER—Dr. T. E. Beyer and Dr. C. F. Kemper of Denver will sail from Baltimore during the first week of July for a brief course of study at Vienna and Switzerland.

DENVER—Dr. Melville Black, Denver, has recovered from a major operation and will shortly be on full duty.

DENVER—Friends of Dr. E. W. Collins of Denver will be pleased to learn that he has fully convalesced and is back at work.

DENVER—Dr. C. H. Darrow of Denver attended the annual convention of the Otolaryngological Society at Chicago early in June.

DENVER—Dr. C. W. Dorsey, formerly of Denver, has now established himself at Alamosa.

DENVER—Dr. W. Wiley Jones of Denver has returned from a delightful holiday in Italy.

DENVER—Dr. A. J. Markley of Denver, who is taking graduate work in Vienna, reports that he is finding much of interest and value. He plans to return in July.

DENVER—Dr. H. J. Von Detten, who was seriously injured several months ago in an accident, will soon be able to get around.

WYOMING SECTION

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EDITOR:
EARL WHEDON, M.D., Sheridan, Wyoming.

EDITORIAL NOTES AND COMMENT

Announcement

IT IS with a deep sense of disappointment that the officers of the Wyoming State Medical Society announce that there will be no meeting this year.

Many hours have been given in arranging the program for the Yellowstone Park meeting, but the decision of the other state societies to postpone the Yellowstone Park meeting came too late to arrange a state meeting to take its place. Perhaps it is for the best. Who knows? But one thing is certain—that the abandonment was not the personal wish of our President, Dr. F. L. Beck. He has a right to feel that the failure does not rest on his shoulders, but that it lies on the membership of the whole Society. Dr. Beck has worked hard for the Society and we believe that next year financial matters will be so much improved that the entire membership will support the officers in arranging one of the best programs ever presented.

In the meantime allow a suggestion to sink in—so far as you can, plan to attend either the Colorado, Utah, Idaho or Montana meetings this year. See how they conduct their affairs and bring back the good points to your own Society. It is true that we cannot all attend these various meetings, but some of us can attend the meetings nearest us.

The old officers will hold over until next year and by additional work in our county societies we may make up the loss of pep our state meetings have always furnished. That we need such a meeting once a year can not be doubted, but the rearrangement

came too late to satisfy the desires of most of the members of the Society. It is no slight task to arrange an outstanding program for a state society meeting, but next year the Wyoming Society will have a meeting we all will be proud to attend. In the meantime do all you can in your local society and make them real live organizations.
E.W.



The Urgent Need for More Tick Serum

SHERIDAN County has been most kindly dealt with in the distribution of the government tick vaccine. We gratefully acknowledge this kindness, but it simply shows the demand on the part of the people who are learning more about Rocky Mountain Spotted Fever and its prevention.

This year the United States Public Health Service has produced and distributed one-third more vaccine than last year. There is now under construction an addition to the Hamilton Laboratory which, if the funds are supplied, will enable the production of more vaccine for next year.

The appearance of Spotted Fever along the eastern coast of the United States will call for a still larger supply and when its value is recognized the demand will constantly increase. According to the reports being received by the Secretary of the State Board of Health, the number of cases this year will be considerably larger than those reported last year. The demand is growing each year and it is certainly hard to refuse people in the cities in order to give the serum to those who live out in the sagebrush coun-

try, but they are in constant contact with ticks, whereas the city people only run slight risks, and as a rule only when they go out into the country. However, in Sheridan we have one case who got the tick in her own garden. This lady had not been out in the country for over a month—yet she has the tick fever.

It is true that all ticks are not poisonous—probably not one in a hundred, but in some localities they are very much more dangerous than others. There is a difference also in the virulence of infected ticks. In some regions this infection is recognized, and in other regions ticks seem to be free.

In the early days of this region fires swept the low lands and kept down the increase in small animals and no doubt destroyed the ticks, but as the country settled up fires were better controlled and as small animal life increased they furnished more food for the ticks. Ticks must have blood to grow and develop, so the chances for their increase improves with the settlement of the country.

So far as the writer knows no cases of tick fever have occurred in persons who get the ticks in the Big Horn mountains, but they do mostly come from the sagebrush land and river bottoms. Cottonwood trees along the Powder river and its tributaries seem to harbor the dangerous kind.

We hope that the government will continue to expand the production of tick vaccine so that no citizen will have to be refused this protection from one of the most dangerous diseases in the western and eastern parts of the United States. It is up to the government, as nowhere else in the world is this vaccine made. You can't buy it anywhere no matter how rich you are.



Wyoming State Meeting Abandoned for Season

AS ANNOUNCED last month, there seemed to be some reason for abandoning the plan for a 1933 meeting after Utah and Idaho withdrew from the Tri-State arrangement. Responses to date to the request for an expression of opinion regarding the matter indicate that Wyoming physicians prefer to wait until next year for a fine ses-

sion in Yellowstone Park. Officers of the State Society are therefore yielding to this sentiment and are announcing that Wyoming will have no State Society meeting this year.

Sincere thanks are due the societies of Cody, Sheridan and Cheyenne to meet with them in case a convention should be held.

In the absence of an all-state meeting the officers urge each county and district to hold two or more meetings during the year. Every society can have a few very profitable meetings if they are properly planned for. Let it not be said that we are neglecting these opportunities. Laramie county is holding monthly meetings with luncheons throughout the year except for a recess during the hot months.

Very sincerely,

F. L. BECK,
President.

❧❧❧ WYOMING NEWS NOTES ❧❧❧

SHERIDAN COUNTY

Dr. J. C. Kamp of Casper, Wyoming, was the honor guest of the Sheridan County Medical Society at its meeting May 23.

Dr. and Mrs. C. E. Stevenson entertained the Society in their home on South Main street. All members were present but two, and a most interesting report of the recent meeting of the American College of Physicians held at Montreal, Canada, was given. Dr. Kamp came to us with a very vivid memory of the good things of that meeting and in a most clear and interesting manner told us the new things discussed there.

The time passed so quickly that it was nearly midnight before the hostess could serve the delightful lunch. After the meeting Dr. Kamp and his mechanic drove back to Casper, 175 miles, to end a perfect day.

The members of the Sheridan Society feel a debt of gratitude to Dr. Kamp and Dr. and Mrs. Stevenson.

Dr. W. A. Steffen, E. G. Dennison, O. L. Veach and P. H. Schunk of the Sheridan County Medical Society attended the Milwaukee Meeting of the A. M. A.

We feel that so many members attending from a society of only twelve members, and having to travel such a distance, reflects very favorably on the standing of the Sheridan County Medical Society.

Take this Journal home to your wife.

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EDITORIAL NOTES AND COMMENT

Milestones of Medical Progress

THE retiring president, Dr. Edward H. Cary, constructed his address before the recent national A. M. A. convention about a few policies carried to a successful issue during his strenuous term of office:

First, Congress has recognized our contention that physicians should possess the power to exercise their own discretion in the prescribing of medicinal liquors. It is imperative that we maintain our professional dignity and remain worthy of this confidence.

Second, the retirement of the Sheppard-Towner Act. This, in effect, proves that a national governmental bureau under lay control cannot successfully control health matters which belong to the states and cities with the help of their local medical men and boards of health. The act provided bequests of the government, to be matched equally by states accepting the plan, for the purpose of reducing maternal and infant mortality rates. The funds were handled by public welfare agencies through the respective boards of health. Physicians were thereby sent to remote regions to encourage infant welfare work in all its forms. Maternal and infant mortality in these regions remained uninfluenced, and most thorough consideration failed to indicate any benefit through its continuation. Such paternalistic activity on the part of the government is not compatible with our profession or with the needs of the American people.

Third, it has been found that the federal

narcotic legislation is inadequate to control the narcotic problem, which is international in scope. Also the federal law fails to cope with local situations. The states are rapidly passing and following enlightened acts.

Fourth, through the legislative committee of the A. M. A., Dr. Cary, and Dr. Woodward, the joint committee of the Senate and House became aware of the government's extravagance in care of veterans and hospital construction. We are told that in the new administration no more hospitals will be built and beds occupied by non-service disabled veterans will be assigned to those with tuberculous, nervous, or mental diseases. Dr. Cary urges our continued opposition to the government's former attitude, since an improvement in our economic condition and depleted treasury may reestablish abuses by veterans with non-service disabilities.

Fifth, the professional support of the minority report of the Committee on the Cost of Medical Care. Physicians and medical societies have striven to further satisfactory medical service through discussion of problems, trial of suggested plans, and discovery of pertinent facts which will assure unity of the professional mind. No plan will survive without the support of the county medical society and the majority of medical men in each locality. The right of the patient to choose his physician must always be preserved. Hospital insurance plans, if successful, will never include medical services.

Among Dr. Cary's general remarks he emphasized the vital function of our medical journals, particularly during this trying pe-

riod. Strange enough, many members of the American Medical Association are not subscribers to its journal, the greatest medical periodical on earth. The reduction of its subscription price by so little as one dollar would have seriously crippled its valuable activities; in fact, income from reserve funds has already been called upon for its continued progress. The Journal, Hygeia, and our State Society publications are indispensable to the progress of medicine. An increase in their circulation is anticipated with improved business conditions.



Colorado on the Black List

UNTRAINED, unqualified, and unskillful professional men being a public liability, the public is partly protected against them through the various boards of licensure. The people at large enjoy a false sense of security in view of this fact.

Over twenty years ago the Federation of State Medical Boards was created by a merger of two preexisting groups for the purpose of improving the chaotic condition of medical licensure and to enforce reasonable educational standards for practitioners of medicine. The goal is only partly accomplished, and several states top the list as inhibitors of the good this organization should accomplish.

Ten states issued 187 licenses to other than graduates of approved medical schools in 1932. In a recent issue of the Journal A. M. A. appeared a comment upon this evil. Accompanying the article was a map of the United States, six states of which stood out in bold relief—very black. Near the center of the picture was our own otherwise venerable state, black indeed. This need not be interpreted as implying laxity on the part of our State Board of Medical Examiners. It is largely a result of the law of 1915 which grants osteopaths identical privileges with doctors of medicine, upon passage of examination in Colorado. It is, nevertheless, a scar on our escutcheon.

This, together with the results of our past legislative session, looks bad for medical

standards in this state. Recall that the most recent convocation of misguided legislators granted the chiropractors their own licensing board. Also remember that none of the medical legislation sponsored by our profession was passed, unless one chooses to boast of the liquor laws. However, they were not passed as a direct result of any endeavors on our part.

It is deplorable that our state should be among those opening their doors to irregular practitioners. Unless the standards of licensure are changed and future legislators are properly informed by medical men, Colorado will one day rank with California as a haven for the charlatan.



American Public Health Association Commends Colorado

THE Colorado State Medical Society and the Denver Public Health Council have sponsored a state wide public health survey by the United States Public Health Service and have initiated legislation designed to improve public health activities throughout Colorado. In view of these actions, the Western Branch of the American Public Health Association has passed a resolution in commendation thereof. This Association has recommended similar programs for the other western states.

Such is the good word received from the secretary of that organization, Dr. W. P. Shepard.



Caloric Value of Beer

IS BEER fattening and, if so, how much? Some people are answering the question through the very dependable trial and error method; others ask the doctor. Many will accept the augmented equatorial circumference; others will be discreet.

Here are the facts: Alcohol has a caloric value of seven per gram; nitrogenous and carbohydrate constituents of beer correspond in caloric value with sugar. Beer comprises the familiar 3.2 of the former and 10 per cent of the latter. It may be safely assumed that these ingredients are assimilated. Mathematical deduction conjures

forth an awesome fact—a quart of beer represents 500 calories, five-sixth that of milk.

Add this to the already over-adequate diet of the sedentary, and probably costive, individual. The result is too palpable to mention.



Heredity in Diabetes

JOSLIN has quoted Hansen in his belief that heredity is more important as a factor in diabetes than has usually been suspected. The fact is important in eugenics as well as in diagnosis and preventive medicine.

According to the work of several observers, we note the following conclusions: Children of two diabetics should develop the disease; a diabetic and a non-diabetic, the latter with diabetic heredity, should produce children half of whom may develop the disease; two non-diabetics, each predisposed to the disease through heredity, should produce children of whom one-fourth will suffer from diabetes; but no diabetes should appear in the offspring of a diabetic and a non-diabetic whose family history is free from diabetes.

Thus, says Joslin, diabetes is a recessive rather than a dominant characteristic. These simple rules should be at hand for the benefit of patients who inquire for information, particularly when it may be the determining birth control factor in certain families.



Immediate Causes of Death in Cancer

THE American Society of the Control of Cancer has recently published a study based upon 500 carcinoma cases with autopsy findings. We have for years debated the mechanism of the fatal issue terminating cancer. The information so far is scanty.

More than 22 per cent of the above series apparently died from cachexia. In all these instances there had been considerable necrosis of the tumor tissue due to ulceration, secondary infection, or impaired circulation. Thus the cachexia could be considered secondary to the lesion which was the immedi-

ate cause of death. In contradistinction to these cases are those wherein remarkably satisfactory nutrition is maintained throughout. The largest proportion of deaths with cachexia occurred in carcinomata of the breast and stomach; the fewest cachectic cases were those with bladder involvement.

There was an incidence of 14 per cent of pneumonia, chiefly of the bronchial type, which may be considered as intercurrent infections. About one-fourth of these cases occurred among the cases wherein the malignancy involved the lip or upper respiratory tract. Undoubtedly the imperfect respiration and potential aspiration of septic material contributed to this incidence.

Renal insufficiency apparently caused the deaths of 13 per cent; renal pathology was consistently demonstrated at autopsy in these cases. Nearly half had cervical carcinoma; about one-fourth had vesical, and one-fifth prostatic involvement.

Peritonitis accounted for 11.2 per cent of the fatalities. It most frequently occurred as a postoperative complication or resulted from necrosis and perforation following radiation.

Three-fourths of the cases with pulmonary insufficiency were due to metastases from mammary cancer. Involvement of the lungs in this manner, plus the cases of pneumonia, abscess and embolism, gives a group of fatalities even greater than those apparently resulting from cachexia.

Hemorrhage caused only 4 per cent of deaths, and in one-fourth of these the cause was indirect in that an obstructive jaundice had seriously lengthened the clotting time. Another surprisingly infrequent etiological factor in the fatalities was general sepsis—less than 5 per cent. The latter fact is remarkable, particularly since a large number of the tumors contained widespread secondary infection.

The above observations do not give any insight into the fundamental mechanism of the decline and demise of the cancer victim. Perhaps there is an elaboration of a specific toxin. If so, it is as elusive as the etiological factors in carcinoma.

THE MEDICAL AND SURGICAL HISTORY OF THE APPENDIX VERMIFORMIS*

W. W. GRANT, M.D.

DENVER

The spirit of the recent past comes back to us in the words of Osler and Pasteur: "Fellowship with the great minds of the race will extend your friendship with the immortal dead." "Men will write, not to destroy, but to build up, and the future will belong to those who do most for suffering humanity."

My purpose is to give a brief history of the rise, progress, and present status of the appendix as a diseased organ, without tedious detail, that will bring into bold relief a small innocent looking vestigial appendage as the most common, the most dangerous and deadly of all intra-abdominal infections. The transition from the old to the new is ever of historic interest, and in this particular, of great importance. "On the wings of night and day, time rustles on." The vista of the past is an every recurring cycle of tragedies, disappointments, and hopes never realized. Yet it is the Valhalla of loving memories of the good and the great of all time. The later day brushes away the cobwebs and, illumined by the calcium light of scientific truth, is the atlas on which the future rests. Omar the Persian said, "When doubtful of your own sufficiency, consult the wise and turn not thy face from old ways."

Greek Medicine and Greek Philosophy dominated the world for many centuries. Hippocrates was far away in advance of his time. Second in distinction as an anatomist and physician at a much later date was Herophilus who with Erosistratus founded the first medical school at Alexandria in the reign of Ptolemy I. He dissected the human body and was the first to state that the brain was the seat of intelligence, in contradistinction to Aristotle who claimed that it was the heart. Still Aristotle, the prophet, teacher and law giver, gave a picture of ideal man as a seeker after truth. It is said of him that he was an astronomer

without a telescope, a biologist without a microscope, a chemist without a laboratory, and a pre-vision of 2000 years without a note of heresy.

Our profession carries in its bosom every experience common to the life of man. In presenting a review, necessarily brief, of so important a subject from both a medical and surgical aspect, with forty years of personal experience and considerable study of its history, I am compelled to ask your considerate indulgence for the use or implication of the personal pronoun oftener than I wish. The cecum, in structure and form, closely resembles that of the anthropoid ape. It has slight, if any, function but serves a useful purpose, while the appendix has neither function nor useful purpose. Rudimentary organs lack power of resistance to disease and consequently are more susceptible to infection. From the sixteenth century to the present day, anatomists, including the immortal Vesalius, have written much about the cecum and the appendix, and only in later years did differentiation become a matter of study and interest. Concerning its diseases, little was known until 1824. The actual knowledge of its pathology and treatment was of a still later date and belongs to the closing days of the nineteenth century, when Pasteur and Lister came upon the scene. Its most important evolution is comparatively recent.

Modern textbooks, journals, and the medical histories of Dunglison and Garrison are ample and give most of the information that is necessary and important in any consideration of the subject. Deaver, Kelly, and Royster have written especially on the subject with ample detail as to the remote past—the two former in text books published in 1905; Royster, a volume on appendix in 1927; and Dean Lewis, a recent chapter in Cecil's work on Medicine. Practically when you have read these you have read all the important history. It is with pleasure, however, that I mention another American who

*Read before the Section on History of Medicine, City and County Medical Society of Denver, November 18, 1932.

gave more time and attention to the bibliography of the cecum and appendix, with more original research than any other in the United States—Merrill B. Rickets of Cincinnati. He was a student of research with a scientific bias. He wrote and published in 1892 a monograph entitled "A Comparative Study of the Appendix in Mammalia, the Herbivora, Reptiles and Fishes," and in this publication quite an interesting report on the surgery of the appendix from 1758 to 1892 with a supplemental list subsequently, and also the most complete of American surgeons in relation to the appendix.

Berengalius, Vesalius, Fabricius, and Fallopius regarded the cecum and appendix as one organ. The name of the appendix was first given by Vidius in 1561, and Sabathier described accurately its anatomy in 1781. In 1706 Morgagni said it received something from or gave something to the intestines. Manifestly it gives nothing. In 1749, Vosse of Germany stood alone among Germans in declaring that the cecum and appendix were separate and distinct organs. In 1567, Fromelius described a foreign body in the appendix post mortem, the first on record. In 1647, Saracinus described fecal fistula from an abscess, doubtless appendicular. In 1682, Thomas Wilson wrote of an inflammation about the beginning of the colon, doubtless appendicitis.

In 1709, Boerhaave and many others in this era called these inflammatory manifestations iliac and colonic "passion" and admonished as to their danger. In 1735, Amyand is, by Deaver, reported as probably the first to remove the appendix. The description of the case shows conclusively that he was operating for strangulated omental hernia of the scrotum with no thought whatever of the appendix. During the operation he discovered in the diseased mass the appendix with a pin projecting from the tip, the head only being in the appendix. He ligated near the end, cut off the tip, and returned the organ to the abdomen. The patient recovered. With the gangrenous wound it is doubtful if the organ was returned to the abdominal cavity, at least the result would indicate this. There was no diagnosis of

appendicitis, and its discovery was an accidental incident. In 1763, Heister is recorded as first to state that the disease in question was in the appendix, and he too called it "the passion" and was the first to demonstrate, by post mortem, perforation of the appendix. In 1759, Mestivier was, by common consent, the first to operate for appendiceal abscess—finding a pin in the appendix, but making no attempt to remove the appendix. In 1812, Parkinson of England, it is claimed, was the first to call attention to perforation of the appendix as a cause of death, demonstrated by post mortem.

Not until 1824 did we begin to see the light of a better day, introduced by Villermay of France who reported two or three cases shown, by post mortem, to be disease of the appendix. He alluded to the morbid anatomy and the rapid progress of the disease. In 1827, another distinguished Frenchman, Mellier, reported eight cases of disease of the appendix, demonstrated also by post mortem. Concretions were mentioned as a cause, and he was the first to suggest operation for the disease if seen early. His report, considered a classic, was translated and published by Joseph Manley in the Medical Record of New York, September 19, 1891. Dupuytren, the great French surgeon, insisted the disease was confined to the cecum, and he opposed operation to the last. His opposition retarded the progress of knowledge in regard to the pathology and treatment of the disease. The internists were correct teachers of that day in this regard for years.

From 1824 to 1847, the French and the Germans were the leaders of opinion, but the latter with the exception of Vosse still regarded the cecum as the chief seat of the disease—as did the English to a later date. From 1834 to 1840, Bright and Addison of England wrote interestingly of the clinical manifestations of disease of the right hypogastrium, especially pain, but in the reverse order as to sequence of the present day. Abscess and its rupture were described and that, regardless of the part the cecum might play, the dangerous condition was in the appendix. In 1848, Hancock found concre-

tions in the appendix and concluded the disease began in this organ. In 1850, Gay reported a case of intestinal obstruction with appendix as the cause but made no effort to remove it. In 1847 to 1851, Gerlach described the valve, Treitz the ileocecal fossa, and Rolleston the folds of peritoneum about the appendix, at present called "Jackson's membrane."

In this era America entered the field more actively. In 1837, Richards of Cincinnati reported, it is believed, the first case in this country of perforation of the appendix demonstrated, as usual, by post mortem. In 1836 and 1838, Hallowell and Lewis of New York reported cases post mortem of foreign bodies in the appendix. In 1840, Grissard and Berard reported cases of gangrene of the appendix and death from peritonitis. Becquerel in 1841 reported a case of lumbricoids in the peritoneal cavity from perforation of the appendix. In 1843, Willard Parker of New York was the first to operate for perityphlitic abscess in the United States; the case was not reported until 1867. In 1846, Nelson reported, by post mortem, gall stones in the appendix. In 1854, he operated for disease of the appendix, doubtless for abscess.

In 1873, Bontecue of New York reported twenty cases of appendicitis and said he had seen few cases recover, and these by local applications and physiological rest to the bowels—the Ochsner method (but of an earlier date). Gouley and Myer, 1875, reported cases of perityphlitic abscesses treated by incision and drainage, with recovery but resulting in hernia. In 1876 Mason treated such a case by trocar and probe-pointed bistoury. The patient died. In May, 1883, Sir Charles Symonds removed a stone from the appendix by external peritoneal section but did not remove the appendix.*

Kronlein of Germany was the first surgeon (1884) to remove the appendix. I did not know this when my first report was published in the Colorado Medical transactions in 1892. Not long after this my friend, the late J. A. Wyeth, called my attention

to Kronlein's operation as the first appendectomy. The operation was performed on the advice of Rokitansky. It is not clear who made the diagnosis. In this connection it may be of interest to state that at the memorial meeting of the eightieth anniversary (May 22, 1932) of Professor Kummel of Hamburg, it was stated and published that he was the first German surgeon to remove the appendix in 1889. Kronlein's patient died in two or three days after the operation. Barlow and Godlec, on September 16, 1885, reported opening an abscess due to a diseased appendix. No attempt was made to remove the appendix.

From 1885 to 1900 we enter the operative era and the days of scientific medicine. At the conclusion of the nineteenth century there was tremendous energy and renewed enthusiasm in all departments of medical study. Pasteur and Lister had opened the door to the scientific study of medicine for the prevention and cure of disease.

We now come to the year 1885. I feel confident that you will pardon me for, as briefly as possible, reviewing the case of the first appendectomy in the United States—the first successful case on record. I report the facts in the interest of American surgical history. By common consent the date of operation, not of publication, determines the question of priority in any surgical operation. The case is not so well or perhaps definitely known to the profession outside of Colorado, and a limited circle elsewhere, because only published in a State Journal, and the profession does not ordinarily read State Journals outside its own. I first saw the case in December, 1882.* A careful examination convinced me that the patient had suffered from an acute attack of perityphlitis resulting in abscess which had ruptured spontaneously in the right groin. My diagnosis was perityphlitic abscess with perforation of the appendix. I made a preliminary operation dividing the fistulous tract on a grooved director as far as I felt it safe to go without entering the peritoneal cavity. I removed from the tract

*See Medical Record of N. Y., December 17, 1921, and Kelley textbook Vol. 1909, page 9.

*Subject: Miss Mary Gartside, aged 22, school teacher residing in Davenport, Iowa.

a date seed three-quarters of an inch long. This tended to confirm my belief of perforation of the appendix. The colon bacillus odor was manifest. The wound was packed and the treatment continued for months. Finally I informed the patient that, in my opinion, she would not recover until the appendix was removed. I urged it be done but admitted there was no authority for it, and I could not perform it unless she was willing to share equally the responsibility for the result. She and the family preferred to continue the conservative treatment in the hope that it would heal without a dangerous operation but finally had Dr. Edmund Andrews of Chicago see the case in consultation. He and Moses Gunn were then the leading surgeons in Chicago. The consultation was held May 14, 1884. He said, "I agree with you as to the diagnosis, but cannot consent to the operation to remove the appendix because it is too dangerous, but if you will make," he said, "a counter incision through the loin connecting with the anterior, it may, by more perfect drainage induce healing." This was done at once, he assisting. The parts drained perfectly without any improvement in the case. This was continued, with the patient walking about, until January 4, 1885, when she consented to the operation so long advised, but for which I could produce no surgical authority.

There were no rules, outlines, or recognized technic to guide us. Preparation for operation was made upon a "clean" dining room table. Dr. C. H. Preston administered ether, and Dr. W. D. Middleton of Davenport, Iowa, assisted with the operation. I proceeded by making an incision almost identical with the McBurney incision in common use at the present time. The abdomen was quickly opened, the anterior cecal wall exposed and its mottled appearance and scars from old adhesions broken up—an interesting revelation. The incision was about three inches long. With two fingers of the left hand inserted full depth into the wound, the appendix could not be felt nor seen by use of retractors. I hesitated to break up the old

strong adhesions for fear of distributing infected material into the peritoneal cavity with resulting peritonitis and death, so I advanced by blunt dissection external to the peritoneal incision to the ileocecal fossa, and with two fingers in the peritoneal cavity and two of the other hand in the external peritoneal wound I promptly located the base of the appendix. The entire organ was concealed by thick strong adhesions, the tip undoubtedly pointing downwards on the psoas muscle. I made no effort to dislodge it from its secure bed in the iliac fossa. Immediately, with a silk ligature in an aneurism needle and guided by two fingers in the abdomen, the base of the appendix was ligated close to the cecum through the external peritoneal wound and this wound to the site of ligature packed with strips of iodoform gauze. The internal peritoneal wound was closed without drainage. Through and through stitches were used. The operation was not long, and no patient ever progressed more satisfactorily. The pack was removed at the end of a week, and to my disappointment the colon bacillus odor showed the ligature had not obliterated the lumen as I hoped. The discharge was measurably controlled by compress and bandage, and the patient was out of bed in two weeks. Four months later on May 12, 1885, under identical conditions, the abdomen was freely opened; all adhesions at the cecal base were broken up; and the entire cecum was brought into the open wound with coils of the ileum. The appendix was divided in the former operation (January 4, 1885) exactly as desired on a level with the walls of cecum. The cecal opening was now closed with interrupted gut and silk stitches embracing all three coats of the bowel with a second row of stitches (Lembert) through the muscular and serous coats. As anticipated, the appendix had given no further trouble, and no further consideration was given it. The progress of the patient was just as satisfactory and free from any untoward incident as after the first operation. The wound was packed with a strip of gauze for drainage. The abdomen was closed closely around the gauze and dressed as before

with gauze and bandage. No peritonitis ensued, but the fistulous opening did not close perfectly. The patient was soon out of bed, walking about as after the first laparotomy. Soon after this date she accepted a position as secretary to a business firm at Fargo, North Dakota; I kept in touch with her. She was not much inconvenienced by the slight discharge. In December, 1891, I received a letter from the patient saying she would come to Denver at once if I thought I could close the intestinal opening. The response was favorable. She was taken to St. Luke's Hospital, and the third intra-abdominal operation was performed on January 20, 1892. The first had been an appendectomy and the second and third to close the intestinal fistula. The technic was improved by paring the edges of all three coats of the intestinal opening and suturing the mucous membrane separately with a running stitch of hard catgut and the muscular and serous coats with two rows of stitches, the last a Lembert silk stitch. The operation was complete with permanent closure of the fistulous opening. The patient lived thirty-four years from the date of the appendectomy on January 4, 1885. I have a letter from her brother and one from the Mary Thompson Hospital of Chicago stating that she died on July 25, 1919, from a recurrent carcinoma of the breast, operated on a year before by a Davenport surgeon. The superintendent of the Chicago Hospital stated there were no abdominal symptoms in the last illness.

Historically and clinically the events of the next fifteen years were replete with interesting and important data. In the *Journal of the American Medical Association* and the *Cincinnati Lancet Clinic*, Ricketts states that "W. W. Grant of Denver was probably the first to deliberately open the abdomen and sever the appendix from the cecum, January 4, 1885, on a diagnosis of perforation of the appendix." He states that Dr. Steman of Fort Wayne, Indiana, removed the appendix on April 22, 1887, and Morton of Philadelphia on April 23, 1887, after a definite diagnosis, removed the appendix. On December 30, 1887, H. B. Sands of New York operated for a perfor-

ated appendix following an acute attack. He evacuated the abscess, trimmed the margins of the perforation in the appendix and then closed it with a stitch instead of removing it. McBurney, on May 23, 1888, performed his first appendectomy, and on March 3, 1889, J. B. Murphy did likewise. About this time Bull, Matterstock, and Wyeth joined the operating procession. In 1889, Lawson Tate opened an abscess, split the appendix, and then stitched it as Sands did. Treves, the distinguished London surgeon, repeated the performance in 1887, all of them two to three years after the first appendectomy, January 4, 1885. No performance in the history of surgery could more forcibly illustrate the doubts and fears of the profession on any subject than in relation to the pathology and the treatment of the appendix at this time. Not until the great teacher, Reginald Fitz of Boston, read his famous paper before the Association of American Physicians on June 18, 1886, on "Inflammation of the Perforating Appendix," did the profession realize that the primary seat of the disease was in the appendix, and from this date the old names of typhlitis and perityphlitis were heard no more. His report of many cases was a classic published in the *American Journal of the Medical Sciences of Philadelphia*, October, 1886. It was a lasting tribute to his skill as a diagnostician and to his genius as a teacher. It was my pleasure to know him, and some years later I met him at the annual meeting of the American Medical Association in Atlantic City. We were talking about the appendix and he introduced me to one of his colleagues with the remark, "Here is the surgeon who operated for the removal of the appendix before I read my paper on the subject." I only mention it as a pleasant incident in the company of one whose accomplishments were such as to make him a delightful companion on any occasion, comparable to Osler in the love and confidence of the profession. For many years most internists and many surgeons advised delay and a watchful waiting policy before resorting to operation.

The profession by stages finally accepted the dictum that the disease was essentially

surgical. A few surgeons for several years urged at this time immediate operation in all acute cases because of the imminent danger of delay from rupture, peritonitis, and death. The waiting policy finally was abandoned and for many years the profession of America has been quite well united as to the necessity of prompt operation in all acute cases. The Ochsner treatment, not at first understood as applying only to delayed severe cases, was in reality applied for a few years to practically all classes and, as might have been expected, increased the mortality by delay. I still believe that the few thought to be saved by this method of delay would, in the same skilled hands, have been saved more certainly by an earlier operation. Only surgeons of known skill, experience, and judgment are best qualified to treat this dangerous class of patients. The mortality of 14 per cent, 20,000 cases annually in the United States, is an object lesson of grave significance and importance, especially when the consensus of opinion of the skilled experienced surgeons believe the mortality should not exceed two per cent. I have read with some surprise an article in the London Lancet of May 14, 1932, by Sir James Berry, F.R.C.S., so at variance with the best surgical opinion of England and the United States, that it is perhaps worthy of mention. It is somewhat significant that his conclusions are based chiefly upon observation and experience of thirty years ago. He deprecates "the grossly exaggerated idea of the younger surgeons" as to the danger of appendicitis from conservative and non-operative treatment." His treatment was rest, starvation, no cathartics, which he considers less dangerous in most cases than operation. He reports 41 cases of appendicular abscesses operated on with 2 deaths, and 39 of abscess "operated on through the peritoneal cavity with 32 deaths." This sounds ominous until one realizes the date and kind of surgery then done as compared with recent years. We feel assured that the latter series of cases belonged to the Ochsner class in which perforation into the peritoneal cavity had occurred with resulting general peritonitis before operation was resorted to. The learned

author does not thus say nor does he give any satisfactory explanation for these results in the hands of different surgeons of equal skill and character as the operators were. A quarter of a century ago it might have been sensational and a temporary cog in the wheel of progress of appendiceal and abdominal surgery. Criticisms of this address in the Lancet by English surgeons stress two types of appendicitis, the acute inflammatory and the acute obstructive form, called the fulminant, in which immediate operation is demanded. In the former, a temporizing or waiting policy may be justified. The obstruction is due usually to concretions. We believe both are infective and that both should be treated by immediate operation. We believe that a diseased appendix, no matter whether chronic, sub-acute, acute or obstructive, should be removed at the earliest moment as the only feasible way in which the excessive mortality in both countries can be reduced. To temporize is to court disaster and to continue the present deplorable mortality rate. The acute form is so uniform in its manifestations as to be a classic. With this history there is no excuse for surgical delay. The pulse, temperature, and blood count at this stage are of secondary importance in the diagnosis, the time when operation is most urgent and successful. Considerable divergence of opinion exists as to the chronic form of the disease. Deaver, with his long and eventful life as a surgeon, says that chronic appendicitis is the most common disease of the abdomen, and that in this form the disease is confined to the mucous membrane. Kelly, in his text book, speaks of it as acute and chronic, and that the chronic may follow an acute attack or be chronic from the beginning. Riedel says that the acute form is preceded by a long period of a mild insidious process. I have long entertained and expressed the same opinion, that the disease is never primarily acute, and that the latter is an expression of disease of indefinite duration. In a paper published in Colorado Medicine in 1905, the writer made the observation, confirmed by many cases, that when the appendix is post colonic the tender point is not the McBur-

ney, but at the intersection of a straight, transverse line from the umbilicus and a straight perpendicular line from the usual McBurney point. At first pointed out by Dieulafoy, thirty or more years ago, these are the cases of ascending infection and the most common cause of subphrenic abscess. These cases may be operated on through the loin without opening the peritoneal cavity with gratifying success.

Etiologically, there is no evidence of a specific germ. It is usually a mixed infection, with the colon bacillus a quite constant companion, the streptococcus the most dangerous and usually present in the fulminant cases. We are often asked if the disease has always been so prevalent. We think not. It seems to be associated with the habits of a higher civilization and with a life of plenty and luxurious living, the daily business and social customs, disregard of body functions, especially of digestion; not one but many things cooperate to diminish resistance to infection. The machinery of the body, like any other machine, wears out prematurely from abuse. We can replace other motors, but not our own.

Operative procedure and technic are so well understood at the present time that it is needless to devote more than a few words to the subject, for beyond certain well defined principles it is the province of every surgeon to use his own initiative and judgment in the matter. The two incisions in common use are the McBurney oblique and the right rectus, which meets most indications satisfactorily. The management of the stump of the appendix is important and varies to some extent, depending on the pathological condition as demonstrated at operation. Dawbarn of New York originated the purse string suture and for a time it was used without ligature of the appendix. Many years ago, on a visit to New York, I attended the clinic of Robert Abbe, then one of the foremost surgeons of that city. I witnessed his performance of an appendectomy in which he used the purse string suture without ligature of the appendix, and in reply to my question as to the danger of leakage from non-use of the ligature he replied that he didn't anticipate any

danger from that source, and didn't think the ligature necessary. John A. Wyeth of New York vigorously condemned the procedure and just as strongly advocated the ligature, and he, more than any other surgeon, was responsible for the early abandonment of the purse string as the sole method of treating the stump. He contended to the last that the simple ligature was all sufficient. In clean non-perforative cases especially I believe he was right, but am compelled to admit that the purse string is still in general supplementary use to the ligature. My personal experience would justify its use in the soft gangrenous appendix cases which the ligature would cut through in 24 to 36 hours, in which class of cases the pouching of the stump would give time for protective adhesions. These are the cases in which to anticipate the not uncommon fecal fistula. These will generally heal in one or two weeks without the necessity of a secondary operation, especially with frequent change of dressings and cleaning of the wound. For twenty-five years I have not hesitated to remove every perforated and gangrenous appendix. No matter how extensive the adhesions, the results have been gratifying. In the old pioneer days of abdominal surgery, the conditions were so different and our knowledge so imperfect that no just comparison with the present is possible.

The ordinary opinions of a day are as evanescent as the time given to their expression. Not what we think and say but what we do is the standard by which we stand or fall. Our aim should be to maintain high educational standards and a code of morals and fitness to serve, in order that we may at all times be worthy of the confidence of an appreciative public. The future of any system must be judged and its value determined by its effect upon the well-being of all classes and not a specialized few. Doctors are philosophers because their studies and chief sources of information are of a demonstrative character, and they believe that natural philosophy is more consistent than any other, more positive, and does more to harmonize all existing knowledge and systems of thought.

SURGERY OF THE UPPER ABDOMEN*

LOUIS V. SAMS, M.D.
DENVER

The recognition of surgical conditions in the upper abdomen has become more accurate in recent years through utilization of the laboratory aids at our command, and the end results have become more satisfying because of time saved by these aids, better surgical technic, and the introduction into the abdominal cavity of a fluid which tends to stimulate the normal physiology of defense and repair. The problems confronting the surgeon in acute inflammatory conditions of the upper abdomen differ materially from those arising in chronic cases. Time, being the greatest elemental factor in acute conditions, places an additional burden on diagnosis and the chances for recovery. In the chronic case, opportunity is given for detailed study, and diagnostic error is made more remote.

Whereas a few years ago surgery of the gall-bladder, stomach, spleen, or small intestine was approached with a certain element of fear by the surgeon, he now attacks the problems involving those organs with greater confidence in his ability to successfully care for the patient. The only exception is found with regard to the mortality statistics of small bowel obstruction. Surgery would be decidedly embarrassed if other conditions within its scope gave the public only a 40 to 50 per cent chance for recovery. This high mortality is due in great part to delayed surgical intervention. The higher the obstruction, the greater the risk and more urgent the necessity for relief. Whether the obstruction brings about a toxicity or perversion of the normal secretion which is more quickly absorbed by the small intestinal mucosae, or endangers life from sudden dehydration, or the loss of hydrochloric acid by vomiting, or interference with the blood supply to the intestine, is not of grave importance in considering the benefits to be derived from prompt surgery. To defer surgical procedure in bowel obstruction cases until fecal vomiting makes

its appearance is fatal. The blood chlorides are lowered, the patient is toxic, and in shock, recuperative power held in blood and lymph is reduced, and he is dehydrated. Add the burden of surgery and we can be assured that operation will only be a means of grateful release to a hopeless individual.

The surgeon is in great debt to the roentgenologist in bringing these cases to early operation. The use of the flat abdominal x-ray plate was first introduced in 1911, but it has come into common usage only recently. The method has simplicity, consumes little time, causes the patient little or no inconvenience and, greatest of all, graphically demonstrates the condition. Time is thereby conserved and the patient's chances for recovery materially increased. In one clinic during eight months in which the flat plate was used, the mortality for acute intestinal obstruction was 23 per cent. The mortality for the three previous years for the same type of cases was 53, 37, and 40 per cent respectively. **Technic of administration:** The patient is given a compound enema to clear the bowel of gas below the obstruction. He is then taken to the x-ray laboratory where an exposure of the abdomen is made on a Bucky diaphragm. No contrast medium is given either by mouth or bowel. The film is at once developed and read, the whole procedure being accomplished while preparations are being made for surgical intervention. The diagnosis by x-ray is based upon the gas-filled intestines and the identification of the portion of the tract involved. Early cases of small bowel obstruction show, in the majority, a greatly distended gut at least the diameter of the normal colon. The folds of Kerkring produce a feathery marking—the "herring-bone" appearance noted by Case. As the bowel becomes more distended there is a flattening of the valvulae conniventes with a straightening of the coils and a sharp angulation at the turns. In large bowel obstruction, the affected portion of the tract is enormously distended. The characteristic haustral markings which are more or less per-

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sistent, but farther apart than normal, aid in its identification.

The great difficulty in diagnosis is in differentiating between an ileus and an acute pelvic peritonitis where the character of the pain and vomiting closely resembles obstruction. In every case the physical signs and clinical symptoms must be carefully interpreted. In ileus, auscultation gives us a silent abdomen, while in obstruction we have the musical, rhythmic tinkling. Early mechanical obstruction cases are without fever and leucocytosis unless engendered by an abdominal abscess. In acute pelvic peritonitis, repeated enemata and flat plates taken at intervals of a few hours will determine whether gas is filtering through partially obstructed coils, made so as they pass through the pelvic adhesions.

This method of diagnosis has materially lowered the mortality in obstruction cases and in many clinics, and with numerous individuals its employment has been of such material assistance that it is routinely used in cases where obstruction is suspected.

In perforation of the stomach or duodenum, the element of pain, which is conducive to shock, must be taken into consideration; consequently, the patient must be treated surgically at the earliest possible moment in order to conserve his recuperative powers. In properly selected cases, spinal anesthesia is the anesthetic of choice in both perforated and obstructed cases. Its analgesic action on the motor nerves controlling the intestines keep them within the abdomen and this permits less surgical trauma and a more rapid operation. Regardless of the multiplicity of technical maneuvers which appear from time to time in the literature, certain tried and true fundamentals form the basis for rational and successful treatment of upper abdominal conditions. The practice of performing an enterostomy in the presence of an actual obstruction, and terminating the operation without relieving the obstruction, is grossly unsurgical and makes no bid for success. The practice of performing a gastro-enterostomy in every case of perforated gastric or duodenal ulcer is in the same category. In the case of gastric perforation,

a resection of the ulcer with its indurated tissue is simply and quickly done, and if performed without the use of clamps the danger of postoperative hemorrhage is negligible. Also we have but one line of sutures within the stomach to predispose to another (marginal) ulcer, whereas if a gastro-enterostomy is performed, the time of operation is lengthened and the danger of secondary ulcer is increased two-fold. If the perforation is sufficiently near the pylorus, a pyloroplasty is done at the same time by removing the ulcer with an elliptical incision and suturing the resulting wound in a fashion opposite to which it was made. This conserves the integrity of the pylorus and, after healing and normal constriction of the scar has taken place, the gastric exit is not affected. Likewise, closing off the pylorus in every case of gastro-enterostomy is, in my opinion, unnecessary and a future menace to the patient. It has not yet been proved to my satisfaction that the normal regurgitation of bile in the stomach does not lessen the chances for ulcer.

If the peritoneum is surgically traumatized or is rendered acutely inflamed by chemical or bacterial agents, we know that there occurs a hyperemia and localized exudation with all abraded surfaces adhering to one another. As time elapses, these adhering surfaces continue to grow more firm and more highly organized, ending in tortuosity of the bowel and oftentimes producing obstruction. The future existence of the patient is one crowded with gastro-intestinal disturbances, pain, apprehension, constipation, and fear of further surgery. With the utmost care in handling, with the greatest attention paid to covering all cut peritoneal surfaces and, in the past, the attempt at improving the end results by introducing substances designed to work on a purely mechanical basis to prevent adhesions, we have been disappointed in the results. If we improved the patient's health and dismissed the case without the necessity of mentioning "adhesions" we were greatly relieved—likewise the patient. In those unfortunates who have experienced a rabid, general peritonitis and who have been required to pursue their daily routine in pain and discomfort, we

have heretofore advised some therapeutic measure for their relief, hoping against reason that it would succeed. To be guilty of suggesting surgery for their relief was to invite justifiable criticism and future trouble.

Within the last few years attention has been called to the use of Amfetin in an attempt to prevent adhesions within serous cavities. This product is a purified, concentrated fraction of bovine amniotic fluid, prepared by an elaborate method of chemical refractionation, followed by purification and concentration. Sterility is assured by passing the concentrate through a battery of Berkefeld filters, followed by a series of rigid sterility tests. It is not claimed that the product is a certain preventive for adhesions, but rather that it supplies to patients, who are lacking in that high degree

of efficient healing, the necessary aid to the processes of defense and repair. In a series of cases, we have found that the following is the rule: There is decidedly less abdominal distress, the abdomen does not become distended, pain is minimized, normal peristalsis is more quickly resumed, and the convalescence of the individual is made far more comfortable than in the case where it has not been used. We find that in all instances following its use, constipation has been notable by its absence. In both the chronic or well-organized adhesion cases, as well as in acute peritonitis, the results have been gratifying. It has opened a field hitherto closed or approached with misgiving—that of relief for the miserable existence of the individual condemned to a life of suffering from the immediate and remote effects of intra-abdominal adhesions.

SOME CLINICAL ASPECTS OF TUMORS OF THE BREAST*

ELLA MEAD, M.D.
GREELEY

Two thoughts have actuated the selection of this subject for my paper.

The first comes with the necessity of making a diagnosis of a breast tumor—the mind wanders to the patient who thought she had a tumor, which we could not find, but who is now dying of metastasis following delayed treatment, or perhaps to another patient who has a mutilated breast but a negative microscopic report. My second reason for presenting this subject is that since I have been attending the Colorado State Medical meetings there has never been a paper presented on the subject of breast tumors, so far as I recall. This seems rather strange since we are so interested in the subject of malignancy and since so many tumors of the breast are malignant.

Without operation, carcinoma of the uterus, at least of the cervix, is far easier to diagnose in the early stages than is carcinoma of the breast. Harrington of the Mayo Clinic says, "There are no early signs of malignancy of the breast and the present

clinical methods are inadequate to detect malignancy until it is fairly well advanced."

Without section a diagnosis in the early stages of some tumors of the breast is very uncertain except perhaps by those who see a great many cases and have studied the subject for many years. There are some other tumors that can be diagnosed only by microscopic section, no matter what the skill and experience of the diagnostician may be. We should study to make the maxim used by Bloodgood our slogan, that where it used to be "minor diagnosis and major surgery" now is it "major diagnosis and minor surgery."

When a patient comes for a breast examination, there are four points to be determined:

1. Does this patient have a tumor in her breast or does she not?
2. If a mass is found, is it malignant or not?
3. If a mass is found, what is to be done about it?
4. We should be prepared to give the patient some reasonably correct prognosis.

Let us consider the first point—does a

*Read before the Sixty-Second annual session of the Colorado State Medical Society at Estes Park, September 10, 1932.

woman have a tumor or not? Bevan says tumors are very common in a woman's breast, that about three out of every hundred have them. He also says that one out of every three who apply for examination does not have any tumor at all, that "tumors are definite, tangible, palpable lumps, and one should not strain his imagination at the end of his finger and force the diagnosis of a tumor where there is none."

First impressions are very important. A thorough, careful history should be taken; as much information may be gathered even though one does not aim to collect any statistical data. Age is an important factor, though not conclusive. Cachexia and emaciation are late symptoms and should call for an immediate examination of the breasts even though the patient may not come for that purpose. If the patient has known of a tumor for some time, get an accurate record as to whether it has been growing steadily—whether it is stationary or fluctuating in size. Carcinoma does not retrogress; mastitis may and cystic conditions do fluctuate.

Like cachexia, any sensation in the breast—pain, drawing, tingling—are late symptoms. "The earliest biological changes are invisible and the earliest histological changes produce no clinical signs." (C. & C.) It is remarkable how extensive carcinoma can be and give no clinical signs, especially in fat breasts.

During the examination, as the patient sits before you, observe the contour of the breast and note any irregularity in the curve below, whether it differs from the opposite breast, any retraction of the nipple, or puckering orange peel appearance of the skin. This may be better revealed by elevating the arm. Always remember that anything you can see is a late symptom. Take special note of any discharge from the nipple, any roughness or redness of the skin about the nipple or areola, or crusty appearance of same. These are symptoms of Paget's disease, especially when found on one breast only. A spontaneous discharge from the nipple is either traumatic, papillomatous, or malignant. Do not fail to note the folds and contour of the axilla or any bulging area

anywhere. Next, palpate by placing the hand flat on the breast. On moving it about one can usually detect a mass if it be there. Do not let the patient locate it for you. Her suggestion may prove a suggested sensation to you also. No one position should be relied on. I like to stand behind my patient with a hand over each shoulder. This gives one much the same approach that the patient has. One must learn to recognize the feel of the normal lobules of the breast and not mistake them for tumors. Having the patient lean forward facilitates the detection of fixation to the chest wall and enables you to feel any deep seated lump, also the saucer-like edges of a mass or borders of the glands. There may be a small lump just beneath the nipple which is easily over-looked. Observe whether the breast is lumpy, nodular, or has a feel like a mass of worms beneath the surface.

If a lump is detected try to move it on the chest wall, then try to move it in the breast tissue and beneath the skin to see if it is adherent or puckers the skin, and lastly make traction on the nipple to detect any pull there. Then note the contour and feel of the mass and its location. If a mass is detected, then the patient falls in the class of the other two out of the three who come for examination, and, Bevan says, roughly speaking, one of these will have a malignant tumor and one a benign tumor. The problem now becomes one of reaching a diagnosis from the clinical standpoint as to which is malignant and which not.

We have one more method of study which is rather new in this field. I refer to transillumination to determine translucence or opacity. Cysts transilluminate clearly but, when filled with sanguinous fluid or blood, the shadow is dense and portends malignancy developing in the cyst. The shadow, when a cyst is filled with blood, is more opaque than that produced by a solid tumor. Fatty breasts transilluminate surprisingly well. This is a great help, for they are the most difficult cases. When there is bleeding from the nipple and no tumor can be felt, transillumination may reveal its source in some papilloma immediately under

the nipple, in a more distant duct, or in the acini.

After such a careful examination one should be able many times to decide whether malignancy is present or not, which is the second step in the study of a case. If benign, a tumor of the breast may be a simple cyst, which is pretty rare, a fibroadenoma, adenoma, lipoma, myoma, anginoma, etc. The fibrocystic tumors and so-called cystic mastitis are under much discussion as to their actual or potential malignancy. The malignant tumors are the various forms of carcinoma and an occasional sarcoma. Cheatle & Cutler make a very interesting classification based on hyperplasias and neoplasias. They claim that hyperplasia of the epithelium with resulting desquamation gives rise to chronic mastitis or mazoplasia, as they prefer to call it, and, when cystic, to that condition called chronic cystic mastitis—the blue domed cyst or Schimmelbusch's disease, also known by some other terms. Cheatle & Cutler prefer to call it cystiphorous disease.

Paget's Disease

The signs of malignancy which may be recognized clinically are eczematous appearances about the nipple and areola such as are seen in Paget's Disease. A flat, scaly, bright red, sore, itching area with harder abrupt margins, usually unilateral, found in a woman past 40, is suspicious. As it progresses the nipple begins to flatten and draw in. In eczema it does not do so and the rash is responsive to treatment and intermittent, Paget's vacuolated, edematous looking cells are always present and may often be identified microscopically in malignancy. They are most often found in the fresh, advancing margin and not in the center of the rash.

Sometimes a mass may be felt in the underlying gland. Transillumination is of assistance here.

It is a much disputed question whether the malignancy of Paget's Disease begins in the nipple area and descends into the ducts or whether it begins always in the ducts or acini and spreads to the surface. The malignant source may be a very small mass beneath the nipple or in remote ducts or acini

and may not be discovered in the usual microscopic examination. Its presence may not even be suspected unless there is already axillary gland involvement. It could be found only by sectioning the whole gland.

For these reasons there is only one form of treatment for Paget's Disease and that is the radical one. Bloodgood says that in a lesion of the nipple of questionable diagnosis he believes a local mastectomy is an illogical procedure on the grounds that it is too extensive an operation if the lesion is benign and too limited if it is Paget's Disease. With that statement Cheatle & Cutler thoroughly agree. Radiation is not considered safe for this condition.

Mazoplasia

The general practitioner faces no more difficult problem in diagnosis than the distinction between mazoplasia, commonly called mastitis, and cystiphorous disease (chronic cystic degeneration or Schimmelbusch's disease), and carcinoma. Mazoplasia itself is not malignant. Of course carcinoma is, but the cystic form of the disease may or may not be. At least 20 per cent of all carcinoma of the breast (Cheatle & Cutler) can be traced back to cystic disease. There are many cases of cystiphorous disease which co-exist with and appear to be developing in cystic, desquamative, epithelial hyperplasia. Simple mastitis of lactation or other cause is usually differentiated if a careful history is taken. This is true of traumatic conditions also, though sometimes not so easily.

We do not know what proportion of the cystiphorous cases end in carcinoma, but those cases which have been observed undergoing the change from benign to neoplastic states, occur in the late thirty or early forty years of life, while the transition from neoplastic states occurs around the fifth decade. I am well aware that this idea of a transition from benign to malignant states does not agree with what some of our own pathologists and others declare—that a tumor always was and always will be what it is now, either benign or malignant. Bevan takes this view also. On the other hand Cheatle & Cutler say, "There may be no such thing as a benign tumor, fantastic as

the notion may appear, all may be malignant and their careers may be interrupted or stopped at any stage."

Chronic Mastitis

Chronic mastitis is a poor name because it implies inflammation, whereas the condition referred to is not inflammatory but is the result of the normal desquamation of cells from the epithelium lining the ducts and acini in which the debris thus formed accumulates and so distends the ducts that they become painful and may feel like worms or shot or lumps (Bloodgood) beneath the surface. It is to be regarded as physiological rather than pathological and exists in infancy, during adolescence, during the menstrual cycle and late lactation, and at the menopause. It might be called involutional.

It is better to use Cheatle's term of mazoplasia. These breasts ache, often unbearably, and are tender, often worse at a menstrual period. Mazoplasia may persist till after the menopause. This condition seems to be associated with excessive corpus luteum action. We find it worse when the corpus luteum is present and the ovarian function low. Hence it seems logical that the condition would improve if ovarian function were increased. This has been found to be the case and patients who were given fresh ovarian residue (gr. V t.i.d.) were greatly improved. This may be a help in differentiating mazoplasia from cystic disease, which is the much more serious disease.

Cystiphorous Disease (Chronic Fibrocystic Disease)

When the ducts and acini, filled with desquamated epithelial debris, undergo dilatation and perhaps hyperplasia, or both, we may have a cystic condition resulting. Some of these cysts may be large and bluish in color and hence called "blue domed cyst" (Bloodgood). Some of them, especially smaller ones, develop neoplastic conditions and some of these neoplasias, such as papillomas, develop malignancy. How many we do not know, but we do know that 20 per cent of breast carcinomata can be traced to cystic disease. The larger, single cysts are more apt to be benign. Cheatle & Cutler say once a cyst becomes palpable, it is with

rare exceptions benign. The dangerous ones are microscopic. There may be only a single cyst or a group of cysts, or the whole breast may be cystic. Transillumination is a great help in this condition. If we could be sure there is only a single cyst, we would feel pretty safe, but we can rarely be sure. In the early stages of the disease there is not likely to be malignancy. Pain is present then, but not much later, as distention ceases. The shape of the breast may be visibly changed.

Just when the neoplasms begin we can't say, nor when the onset of malignancy takes place, but if at any point or area of the worm-like or lumpy mass we can detect a firmer, more solid portion, we should regard it very suspiciously, especially if at the fourth or fifth decade of life.

Surgery is the only treatment for any form of cyst. If it appears to be single, a wide excision is enough, but one should be prepared to do a radical, if, on examination, any indications of carcinoma are found.

Papilloma

The chief symptom of papilloma is bleeding from the nipple. It may develop in cystic conditions and may or may not be malignant. Some say 15 per cent show carcinoma. At any rate, it seems to be one of the transitional phases of cystic disease into carcinoma. Irritation seems to play quite an important part in the etiology. It may involve only a single duct or its acini. Some of these tumors cease to bleed and cause pain and apparently are cured, but such breasts should be held in suspicion.

Radiation has been used, but should be reserved for those cases inoperable for other reasons (Cheatle). Excision of the affected part is the better treatment with careful microscopic examination (Cheatle).

Carcinoma

There is no positive way of diagnosing carcinoma except by the microscope, or else to wait till the disease has reached a dangerous state, with such symptoms as the involvement of lymphatic glands, which usually occurs earlier than the puckering of the skin and its ulceration, with hard indurated, abrupt margins and later cancer en cuirasse. If we recall the distribution of lymphatics

we can see the possibility of metastases to the axilla, intercostal spaces, substernal glands, less often the supraclavicular and cervical glands or opposite breast. It may follow the ducts to the nipple. A gradual retraction of the nipple is almost a pathognomonic sign of carcinoma. If there be any discharge from the nipple it should be examined. Cancer cells may sometimes be found which confirm the diagnosis.

Before this dangerous stage has been reached, it must at some time have been an uneven, solid, hard or stony lump, movable with the breast, but not in it; the crab-like legs or tentacles prevent this, but may not yet have become attached to the skin. It may be smooth and round when small and involving some duct or group of acini more like a cyst. In such cases transillumination helps in the diagnosis. In these early stages they are much more safely operated. "Localized nodularity, a tumor and a stabbing, sharp, momentary pain that always occurs in the same place, are, individually, signals that demand immediate investigation and diagnosis, whether one occurs alone or all combined" (Cheatle & Cutler). Glands may contain carcinoma cells long before they can be palpated. Hence it is so necessary to determine at once on operating whether a tumor is malignant and, if so, to remove all glands whether they show any signs or not. Some authorities (Fink) say the glands may be involved as early as the sixth month and are always involved by the end of a year after the beginning of the disease. Deaver said clinically they found only 31 per cent with palpable glands, whereas 62 per cent were found microscopically in their cases.

In trying to make an early diagnosis of carcinoma, we should not be too much influenced by age. Judd says 61 per cent of their cases have been between 40 and 60; but it has been found as early as 15 years. Very few are found under 20, however. A smooth, solid, round and freely movable tumor in a woman under 25 may be regarded as fibroma or single simple cyst, and treated as such, provided it is watched. If the patient is older, it should be removed by wide excision and diagnosed microscopically. The

development of carcinoma in fibroadenoma is very rare.

Lipoma

Such tumors as lipoma are usually softer, but may offer some difficulty when in heavy, fat breasts, and may require exploratory operation. Transillumination is a great help in these cases.

Treatment

In general, to sum up the treatment, when a diagnosis of carcinoma has been made, there are but two forms of treatment to be considered—surgery or radiation, or a combination of both.

There are a few very malignant, rapidly growing carcinoma, called anaplastic carcinoma, which retrogress very quickly with radiation, so that in especially advanced cases of this type a patient is safer with radiation. In fact, surgery is contraindicated if one can make the diagnosis and dares to wait a few weeks for results. If this form of carcinoma can not be diagnosed, whether the case is advanced or not, surgery is safer. It is recognized that other forms of breast carcinoma are resistant to radiation. It does no good before or after, using methods known up to date. If the anaplastic form is found on operating, radiation should be used as a follow-up treatment (Cheatle).

It raises the question of whether radiation should always be used first. At least it should be used in all cases which are considered inoperable, such as when

1. The mass is attached to the ribs or sternum.
2. The glands above the clavical are involved.
3. The axillary glands are fixed and confluent.
4. Acute and fulminating.
5. Cancer en cuirasse exists.
6. There are distant metastases.
7. There are constitutional reasons which contraindicate surgery.

A Glasgow surgeon by the name of Beatson removed the ovaries of a number of women suffering from inoperable carcinoma of the breast, with apparent improvement. His theory was based on the idea that ovarian activity excited epithelial activity

in the breast, and when they ceased to act, a process of degeneration took place which he hoped would cause a similar degeneration of cancer cells also. The best results were in slow growing tumors in patients before the menopause.

Prognosis

The fourth point to be determined has to do with prognosis. I mean a prognosis of pretty certain probabilities which we are justified in giving a patient before any treatment is begun. We are able to do this with quite a degree of accuracy, owing to valuable records which have been kept by some of our leading specialists, notably Bloodgood of Johns Hopkins. The chief note in his prognosis is "the known duration of the lump." When you have that item in a malignant case you can classify her prognosis with pretty definite figures and give it to her, or her family, with what reservations seem best in a given case.

For example: If a woman comes to you with the statement that yesterday she noticed a lump in her breast, her chances of permanent and complete cure are infinitely greater than are those of the woman who says she noticed her lump a month or a year ago. In fact, the percentage of five year cures gradually falls and the recurrences after a lapse of five years gradually increases with every two month period of time of the known duration of the lump before treatment was instituted. This statement is based upon a study of 33,000 cases. To quote Bloodgood, "The known duration of the lump is the only controllable factor in the cure of cancer today."

Harrington, of the Mayo clinic, bases his study of prognosis on the presence or absence of lymphatic involvement and urges greater efforts to determine this factor, but he claims the only point on which a prognosis actually rests is the completeness with which the diseased tissue is removed at the initial operation. Such a prognosis, of course, is too late to be of reassurance to a patient who is facing an operation.

Dr. Summers, of Omaha, gives the following statement which agrees with records

from other investigators and which seems to be very useful to give to patients:

(a) If operation is done before the axillary glands are involved, the patient has a 70 per cent chance of cure. Bevan make it 75 per cent.

(b) If there is only slight involvement and radical operation is done, there is a 33 per cent chance of permanent cure.

(c) If the glandular involvement is quite apparent, there is only a 10 per cent chance of cure.

There is one hopeful note, however, in the statement that even in very advanced cases there is a 5 per cent chance of cure. The conclusions to be drawn from the study of this subject are that the tumors of the breast such as single cysts and fibroadenomata, free from nodules or irregularity, found early in life, are benign and remain benign, in all probability. They are to be treated by the removal of a broad adjacent segment, which should be subjected to the microscopist as a safety measure against human error.

All cystic masses and bleeding papillomata of any age are to be regarded as potential malignancies, though it may take thirty years to make the transition. They should, therefore, be thoroughly removed and subjected to biopsy, followed by a radical operation if malignancy is found. All irregular, nodular or fixed tumors, with or without other symptoms, and especially in the later adult years, as past the forties, are to be regarded as malignant. These, together with Paget's Disease, should be subjected to radical operation, and it is unfair to the patient not to be prepared to do a microscopic examination at the time. One should not have to wait days before completing the surgery. The risk to the patient is too great.

The last analysis of the situation develops upon the microscopist in very many cases. However, we can improve our clinical diagnosis immensely by closer attention and study.

Take this Journal home to your wife.

THE ASSOCIATION OF ECZEMA WITH ALTERATION IN GASTRIC SECRETIONS*

O. S. PHILPOTT, M.D.
DENVER

Had Sir William Osler been a dermatologist, he might have said, "Know eczema and all skin diseases will be revealed unto you." This prosaic condition has through the years been narrowed down by various discoveries and researches. Thus, the whole group of dermatomycoses were taken out of the classification of eczema through discovery and investigation of mycology. Other groups have likewise been removed by discovery of specific agents. Recognition of occupational dermatoses has segregated another large group. In spite of this, eczema still forms a preponderance of a dermatologist's practice and is estimated to comprise around 30 per cent of all skin conditions.

Eczema has no specific etiology. It is not agreed upon whether it is of internal or external origin. Both of these theories have their staunch advocates. Others are content to consider it as caused by some external irritant in a patient with an eczematous tendency. Due to its protean manifestations, it comes at times into the field of all physicians regardless of their specialty. Its intractability and chronicity make it one of the major problems with which we are forced to cope.

During the last few years we have been repeatedly seeing an association between the various types of eczema and alterations in the gastric secretions. This association is a condition which is not generally known, and when it is present its recognition is very important. That such an association is no mere coincidence seems to be proved by the proportion of cases showing definitely such an association. Further, that this association has a direct bearing on the skin condition seems also to be proved by the fact that correction of gastric dysfunction in the ma-

jority of these cases is followed by clinical improvement. The proportion of cases of eczema showing gastric dysfunction has not been investigated, but is of such frequent occurrence that we consider it as one of the first features to be borne in mind in treating this troublesome condition.

A number of cases to illustrate this point have been used as the basis for this paper. These cases represent the various types of eczema of different ages and of varying degrees of severity and duration.

SUMMARY OF CASES

Total number of cases	50
Males	23
Females	22
Average age of patients	48
Youngest	18
Oldest	80
Types of eczema—	
Erythematous-squamous	18
Erythematous-squamous with lichenification	12
Vesicular	6
Papular	1
Papular with lichenification	1
Combined	12
Duration of eruption—	
Average case	39 weeks
Shortest	1 week
Longest	20 years
Cases with history or symptoms of gastric disturbance	7
Cases with no history or symptoms of gastric disturbance	43
Clinical results—	
No improvement	4
Slight improvement	2
Improvement	44

GASTRIC ANALYSES

Total number performed	50
Number within normal limits	4
Number showing abnormality	46
Number showing hypoacidity	24
Number showing hyperacidity	22
Of those showing hypoacidity, the average is free HCL, 4; total acidity, 23.	
Thirteen show an achlorhydria.	
Of those showing hyperacidity, the average is free HCL, 51; total acidity, 78.	
Eleven show a free hydrochloric acid above 50.	
Three show a free hydrochloric acid above 80.	

Comment

Fifty cases were selected from the ordinary types of eczema. These ranged in age from 18 to 80 and were about equally divided in regard to sex. Only seven of the fifty patients gave a history or complaint referable to the gastro-intestinal tract, in

*Read before the Sixty-Second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932. The author's presentation of this paper was accompanied by a chart depicting the pertinent facts from fifty cases in his and Dr. Markley's private practice. This publication includes only a summary of the chart.

spite of the fact that 92 per cent showed an alteration in gastric secretion.

There is no apparent connection between the type of eczema and the direction of the hydrochloric acid curve. For example, in the eighteen cases classified as erythematous-squamous, ten showed a deficiency of hydrochloric acid, and seven showed an excess of hydrochloric acid. Two of these cases gave a very striking illustration of this point. Both were hospitalized at the same time. Both had clinically similar types of eczema. Neither gave any complaint or history of gastric disturbance and yet one had a gastric analysis of free HCl., 55, total acidity, 95, and the other had an achlorhydria.

In summarizing the clinical improvement, four showed none. Two were slightly improved and forty-four showed improvement varying from relief of itching and discomfort to complete remission of all objective and subjective symptoms. Rest in bed, proper diet, soothing local applications and compresses all give relief in themselves, but these measures alone do not compare with

the often startling improvement seen in many of these cases where the above measures are combined with correction of gastric dysfunction.

From this data, it is not claimed that the cause of eczema has been found. Neither is a cure proposed, but it is demonstrated that gastric analysis is an important feature and should become a routine procedure in dealing with eczema. We consider it as important in these cases as a blood chemistry in diabetes or a white blood count in suspected visceral infections.

Conclusions

1. Fifty cases of eczema are presented in which gastric analyses were done.
2. Ninety-two per cent show an alteration of gastric secretions.
3. Forty-eight per cent show hyp acidity.
4. Forty-four per cent show hyperacidity.
5. Eighty-six per cent give no history of gastric disturbance.
6. Gastric analysis is an important adjuvant in the treatment of eczema.

PNEUMOPERITONEUM IN THE TREATMENT OF TUBERCULOUS PERITONITIS*

O. M. GILBERT, M.D.
BOULDER

In January, 1924, I reported, in the American Review of Tuberculosis, two cases of tuberculous peritonitis with serous effusion treated by means of pneumoperitoneum. In March, 1926, I reported two more cases, one of whom received not only pneumoperitoneum for tuberculous peritonitis but at the same time pneumothorax on account of a rapidly progressing tuberculosis of the left lung. There was another case treated for tuberculous peritonitis in 1924 which I did not include in my later report for the reason that only about 350 c.c. of air could be introduced on account of the extensive adhesions existing. However, the patient's temperature came from 103° down to normal within a week, remained practically so, and

she made an apparent recovery. At that time I considered the amount of air introduced inconsequential and that the recovery was merely a coincidence, but as similar experience has been reported by others, I feel justified in reporting it in my series.

CASE REPORT

In May, 1930, a man 49 years of age was referred by Dr. William Plummer of the Mayo Clinic and Dr. Broman of Greeley. He had tuberculous peritonitis with marked ascites, and a far advanced pulmonary tuberculosis, the latter being an extensive reactivation of an old fibroid process involving principally the right lung. The old process was mainly in the apex, but the recent involvement extended to the diaphragm and filled the costophrenic angle. The abdomen was markedly distended, the lower and lateral superficial abdominal veins being much distended. The liver and spleen could not be made out. There was marked abdominal distress and much difficulty in swallowing. Temperature was 100° to 103°, and there was much dyspnea.

On May 13, 3200 c.c. of dark straw colored fluid was withdrawn from the abdomen and 1850 c.c. of filtered air introduced. There was not much

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932.

relief from the distress which he was having. A week later, 3000 c.c. was withdrawn and 1500 c.c. of air introduced. The aspirations and air instillations were done seven times at 7 to 10 day intervals, each time getting less fluid until the eighth time when no liquid could be withdrawn and no air instilled since no space could be found. However, there was still some air present since the liver dulness was still obliterated.

His temperature came down rather slowly, not reaching normal for nearly two months. This was contrary to the five previous cases, in which it came to normal in ten days to two weeks, and his more protracted course was probably largely due to the more marked pulmonary activity. His improvement, however, was steady after the second instillation of air.

At the end of five months he was much improved, having gained eighteen pounds, having normal temperature and almost no cough or expectoration, and was doing light chores on his farm. Eight months after beginning of treatment he went through a rather severe pneumonia but made a good recovery.

When last examined, seventeen months after he was first seen, he still complained of a considerable amount of gas distress in the abdomen, especially after eating a large meal. He also complained of much difficulty in swallowing. Examination, including a fluoroscopy of the chest and a barium meal, revealed no cause for these symptoms except that the esophagus was very markedly drawn to the right, at the level of the upper border of the manubrium, by the very great degree of fibrotic contraction of the apex of the right lung. After a decided halting at this point, the meal made normal progress. He was otherwise in fair health and doing light work.

I have been able to trace this case, as well as the five aforementioned cases, within the past six months. All are working and apparently well except the last one, who is in fair health.

In addition to these cases of tuberculous peritonitis with serous exudate, I have in two cases of tuberculous enteritis, who were operated, introduced air as the abdominal closure was completed. There was apparently some benefit derived therefrom, as the patients were more comfortable and vomited much less than is usual after this operation. In fact, in one case, air was injected two or three times after the operation on account of the apparent comfort induced thereby. However, as both patients were far advanced pulmonary as well as enteric cases, they went on to death.

Each of the cases of serous peritoneal exudation, except the nine year old boy, had from slight to marked pulmonary involvement which improved so markedly after the introduction of air into the peritoneal cavity that it could hardly have been mere coincidence. Whether it was due to inhibiting

the descent of the diaphragm with each inspiration and thereby lessening the intrathoracic negative pressure or to the increased oxygen absorption into the blood, I cannot say. Anyway, this phase of the experience has made me wish for the courage to try the method of inflation of the peritoneum in cases of purely pulmonary involvement, especially in some of those that are not doing well and in whom artificial pneumothorax is inadvisable on account of the too marked bilateral involvement, or impossible on account of adhesions. Would it not at least serve some of the purpose served by phrenectomy—stopping to a certain extent the pumping action of the diaphragm on the lungs? I think I shall try it.

When I did my first pneumoperitoneum in July, 1920, I was not aware of the fact that it had been previously done, but I have since learned that it had been done several times in Europe and by Bainbridge in New York but always, so far as I can ascertain, as an adjunct to laparotomy—filling the abdominal cavity with air or oxygen as the wound was being closed. Most all of these used oxygen while I used filtered air.

As I stated in my original paper, it had long appealed to me that all that was accomplished by the more formidable procedure of laparotomy could be accomplished by this simple procedure. This, of course, would not hold in case there was a focus of infection, such as the appendix or a fall-opian tube that could be removed. Just how laparotomy cures is still a matter of dispute, but aside from the removal of foci infection, it seems there can only be two main factors in its operation: First, the effect of mechanical stimulation and the incidental production of adhesions, setting up collateral circulation as in the Talma operation. Second, the chemical effect of the constituents of the air. Whether this be mainly due to the oxygen, either directly by its effect upon serous surface or through its absorption, is not definitely known. Any effect of the actinic rays contained therein is extremely problematical. The plan of Eiselberg in Vienna of exposing the viscera to the sun for one-half to three-fourths of an hour, could probably only have been helpful to

the extent that it increased the congestion of the surfaces. Meeker thinks that the bactericidal property of oxygen in the peritoneal cavity may be a factor; Bainbridge says that this may be conceded.

My preference for air rests upon two grounds: First, its ready availability and second, the fact that the oxygen absorbs more rapidly than the nitrogen. The latter remains to maintain the desired space, thereby making refills much easier and keeps irritated surfaces apart much longer.

Most authors have maintained that with oxygen injections the gas is absorbed in two or three days, while with the use of air I have been able to demonstrate the obliteration of liver dulness twelve days after the last previous injection. Then, too there is pretty definite evidence that air is less irritating to serous surfaces than is oxygen. However, some would claim that this would be in favor of the oxygen because irritation is desired. The method of procedure is exceedingly simple, especially where there is an abundance of fluid and very few adhesions, as usually is the case. I use the ordinary pneumothorax apparatus. After selecting a site, usually below the level of the umbilicus slightly to the left of the median line, I locally anesthetize the abdominal wall, including the peritoneum and then use a small trochar and cannula to withdraw the fluid. While the cannula is still in situ, I attach the pneumothorax apparatus and slowly introduce filtered air, usually instilling about two-thirds as much air as I had withdrawn fluid, although some introduce more air than they had withdrawn in liquid. At first I tried to get manometric readings of the intra-abdominal pressure but found this impracticable on account of the tube filling with the liquid. In case there is little or no fluid, care must be used in instilling the first air, for serious accidents have happened in introducing the first air under pressure—whether from air embolism or peritoneal shock has not yet been definitely determined.

E. W. Hayes of Monrovia, California, has used oxygen inflation of the peritoneal cavity in several cases of tuberculous enteritis with much improvement in the symptoms of

the patient and one apparent recovery. Scott D. Gleeten of Monrovia, in 1925, reported three cases of tuberculous enteritis, treated by oxyperitoneum, with marked relief of symptoms in all and apparent cure in one. The relief from pain and diarrhea was usually very striking. McCorkle of New Orleans, in 1930, reported nine cases treated by oxyperitoneum, seven of these being principally tuberculous enteritis while two were predominately peritonitis with ascites. Of the nine cases, four were apparently cured and three much improved. He also states that the relief of symptoms was very striking. This is certainly worthy of further trial.

Several authors have, in the last four or five years, reported cases of tuberculous peritonitis treated by either oxyperitoneum or pneumoperitoneum, with most encouraging results. It certainly is to be hoped that the method will be given a more extensive trial.

DISCUSSION

Gerald Webb, M.D., Colorado Springs: Dr. Gilbert deserves the greatest credit for being a pioneer in this field. I haven't been able to follow the work by doing it myself, but Dr. Gilbert was really practically the first who brought this in. As he has reminded you, we tried using different gases in our pneumothorax cases many years ago. Nitrogen was the first gas advocated. To begin with, we found nitrogen was rather impure. It didn't matter whether you put nitrogen or oxygen into the chest, we got a diffusion of the gases from the blood, so we got equalization and mixture of gases in a very few hours.

Whether there is something in the oxygen or air or changes in circulation or what affects it, I really don't know, but I think Dr. Gilbert is on the way to find out.

I. D. Bronfin, M.D., Denver: The improvement in the pulmonary lesion which Dr. Gilbert has observed in his cases of pneumoperitoneum might be due to partial splinting of the diaphragm, although it is realized that the oxygen or air in the peritoneal cavity is probably absorbed within two or three weeks. A more probable reason for the improvement of the pulmonary lesion following the introduction of pneumoperitoneum is the improvement of the peritonitis itself. Not infrequently we see great improvement in the pulmonary lesion following the successful eradication of extra-pulmonary lesions.

If families would budget their costs of illness as they would budget their rent, food, and other essentials, 90 per cent of all the people could pay without outside assistance for their medical service.—Rorem.

CASE REPORTS

COINCIDENT DISSECTING ANEURYSM OF THORACIC AORTA AND SACCULAR ANEURYSM OF ABDOMINAL AORTA*

R. H. KAMPMEIER, M.D.
and
J. W. WHITE, M.D.
PUEBLO

The simultaneous occurrence of a ruptured aneurysm of the abdominal aorta and dissecting aneurysm of the thoracic aorta is of such interest that it seems warranted to report a case. Aneurysm of the abdominal aorta, according to C. P. Howard, was found in sixteen cases out of 18,000 admissions to Osler's wards at Johns Hopkins Hospital. Dissecting aneurysm of the aorta is a condition of much greater rarity, only two such cases appearing in that hospital over a period of sixteen years. The authors have been unable to find a report of a case in which the two pathological entities were associated as distinct and separate lesions.

CASE REPORT

Only points of relevant interest will be considered in the history and the physical examination.

The patient was a white male, aged 67 years. He was first seen by one of us (J. W. W.) on Oct. 1, 1931. The occasion for a physician's visit on that date was the onset of a right-sided hemiplegia. There had been sudden loss of speech, followed by a fall to the floor. Though consciousness was not lost completely, the patient was stuporous. Examination at that time showed a right-sided hemiplegia, inability to articulate, and a systolic blood pressure of 200 mm. of mercury. After several days, the pressure had dropped 20 mm.

The patient remained bedridden at home until his death in March, 1932.

Subsequent History: This was obtained from the patient's wife. He had complained of pain in the lower abdomen for a period of six months before the appearance of the hemiplegia. The pain was described as being constant and of boring character. It was of such severity that it frequently kept him awake at night. A hot water bottle was often used for relief of pain. Increasing

constipation and difficulty of urination accompanied the pain. Pain was relieved to some extent by the use of enemata or by urination. Hemorrhoids developed and distressed the patient a great deal during this period of time. (These symptoms undoubtedly were caused by the enlarging abdominal aneurysm.)

Shortness of breath had appeared as a complaint two or three years before the onset of the hemiplegia. Cough also began to manifest itself at about the same time, especially when the patient was lying down. As a result, the patient had been sleeping propped up on three pillows. Dyspnea increased in the year before his death, and edema of the ankles had appeared at that time.

Three months before death, the patient began to indicate the presence of pain in the chest, which he referred to the mid-portion of the sternum. He complained of this persistently and it seemed to distress him greatly. Since he was bedridden, there was no relationship to exertion. Apparently it did not radiate.

Past History: In the past history, nothing of great importance was learned. A right inguinal hernia had appeared following a blow to the abdomen (kicked by a horse) in youth. Patient had had lobar pneumonia in the right lung three years before the present illness, at which time he was found to have a hypertension and a systolic murmur at the cardiac apex.

Family History: A wife and four children are living and well.

Physical Examination: The patient was found to be a bedridden male of aged appearance. He was unable to articulate. The pupils reacted to light and accommodation. An arcus senilis was present. The facial muscles showed the residual changes as result of the hemiplegia. The tongue deviated to the left.

The peripheral vessels were tortuous and the walls demonstrated the hardening of advanced sclerosis. The heart was found to be borderline in size upon percussion. There was no retromanubrial dullness. On auscultation there was no arrhythmia. The rate was 80. At the apex a systolic blow was heard; this was audible over the whole precordium. At the base, the aortic second sound was accentuated. The blood pressure was 210 mm. systolic and 100 mm. diastolic. At the lung bases were heard scattered rales bilaterally.

In the abdomen upon inspection there was noted apparent fullness in the region of the umbilicus. A mass was palpable in midline in this region. Its size was that of a small grapefruit and definite expansile pulsation was demonstrable. No murmur could be heard over this mass. The tumor was first felt two months before the patient's death and was suspected of being an aneurysm of the abdominal aorta by one of us (J. W. W.). The other of us upon seeing the patient in consultation concurred in the diagnosis. The residual neurological signs of a right-sided hemiplegia were present.

Laboratory Findings: The urine was not re-

*From the Pueblo Clinic, Pueblo, Colo. Dr. Kampmeier is Assistant Professor of Medicine at the Louisiana State University Medical Center, New Orleans, La.

markable. The blood Wassermann and Kahn tests were both negative.

The patient died suddenly on March 2, 1932.

Necropsy: This was done by the authors. The surface of the brain showed no pathology. On section, in the region of the internal capsule was found a cavity, 7 by 12 mm. in diameter, containing yellow fluid and some granular material. This was unquestionably the site of hemorrhage.

The heart was only slightly enlarged. No free fluid was found in the pericardial or pleural sacs. The lungs were crepitant throughout.

In the abdomen there was some free fluid. In the left side of the abdomen, extending from the diaphragm down to the rim of the pelvis, was an immense hematoma, filling the whole left abdomen so that its ventral level was beyond that of the aorta. The hematoma was retroperitoneal. Liver, spleen, stomach and intestines were grossly normal. The kidneys appeared normal and the capsule stripped easily.

The heart and the whole aorta, including the common iliac arteries, were removed in their entirety. Nothing remarkable was found in the heart. The valves were intact; in the aortic valve there was no widening of the commissures. Before opening the aorta, a thickening of the wall was noted in the descending portion. This involved the posterior and left lateral wall. In the abdomen was found a large saccular aneurysm extending from about 2 cm. below the origin of the celiac axis down to the bifurcation into the common iliac arteries. This mass was 11 cm. in length and 9 cm. in breadth.

Upon opening the aorta, a most advanced degree of atheroma was found. Throughout the whole length there were yellow plaques, and in the region of the arch there were found breaks in the intima in several of the atheromatous patches. At the origin of the arteries arising from the transverse arch were beginning aneurysmal dilatations. (These may be seen in the

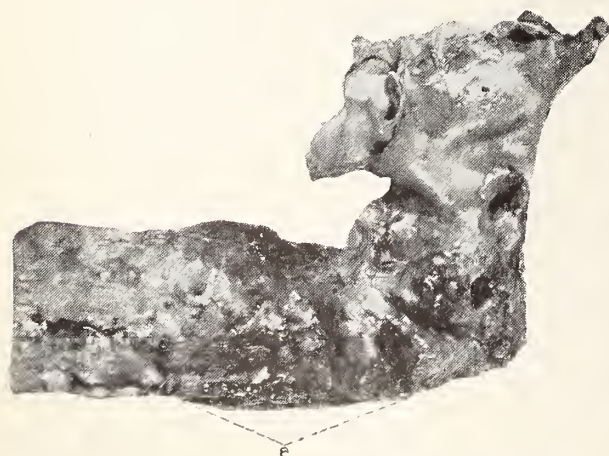


Fig. 1. Photograph showing advanced degree of aortic atherosclerosis. The dissecting aneurysm is incised longitudinally. The extent is indicated by (a), with the opening at the junction of the descending arch with the thoracic aorta.

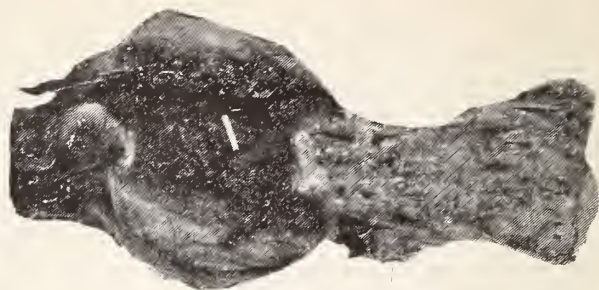


Fig. 2. Photograph of the saccular aneurysm of the abdominal aorta. (a) Origin of celiac axis. (b) Organized thrombus. The marker is placed in the perforation in the posterior wall of the sac.

illustration.) At the junction of the descending arch and the thoracic aorta was a transverse slit in the intima, 3 cm. in length. This was the opening into a dissecting aneurysm which had dissected its way downward for a distance of 10 cm. as measured in a longitudinal incision through the dissecting aneurysm. This lay to the left lateral and posterior aspects of the aorta. At its origin the aneurysm was 1.5 cm. in thickness as measured from intima to adventitia. It was filled with recent clot and tapered to a point at its most dependent part. (Fig. 1).

The saccular aneurysm of the abdominal aorta was incised longitudinally. The anterior wall of the sac consisted of organized thrombus 3.5 cm. in thickness. More recent thrombus lined the aneurysmal cavity. It had ruptured posteriorly and to the left through an opening about 1 cm. in diameter, this being the origin of the huge retroperitoneal hematoma described above. The aneurysm laid open was 14 cm. in width and 11 cm. in length. There was no demonstrable erosion of the vertebrae. Recent thrombi had begun to extend into the common iliac arteries. (Fig. 2).

Comment

The diagnosis of abdominal aortic aneurysm was made on the characteristic findings in this condition, namely constant boring pain and expansile tumor. In the absence of severe physical strain or trauma, the dissecting aneurysm could not have been suspected. The persistent retrosternal pain present for three months in our patient may have been specifically related to the dissecting aneurysm.

Keep your doubts to yourself, and give the patient the benefit of your decision.—O. W. Holmes.

DIDELPHYS UTERUS

ROBERT H. SCHROEDER, M.D.
DENVER

Didelphys uterus is not an uncommon anomaly, being frequently reported in literature. The etiology is described as either a faulty juxtaposition of the Mullerian ducts or lack of absorption of the septum produced at the time of fusion of the two ducts.

Embriologically, the Mullerian ducts appear as cornet shaped funnels, the ostia abdominale, which grow vertically downward by means of budlike projections, lateral to the Wolffian ducts until they reach the point of insertion of the inguinal folds, later the round ligaments. The ducts then bend sharply inward until they touch in midline, make another right angle bend and run downward, parallel to each other and the Wolffian ducts, forming the so-called genital cord or uterovaginal anlage. At their lower end the ducts again make a short bend forward, producing the short horizontal links which break into the urogenital sinus. The mesenchyme supplies the musculature covering the epithelial tubes and thus gives to the uterus its external form. Fusion of the two contiguous mesial walls of the Mullerian ducts occurs first, to form a single septum. Later this septum is absorbed in a caudocranial direction, thus producing the single utero-vaginal canal. Above the uterine insertion of the round ligaments, the ducts throughout life remain unfused as the fallopian tubes.

The hymen appears as Muller's tubercle, which is compressed into a disc shape at the urogenital sinus, where the utero-vaginal anlage breaks through. It is lined internally with vaginal epithelium and externally by the epithelium of the urogenital sinus or future vesibule. These layers, with the mesenchyme between, constitute the hymen. The circular aperture of the hymen is for a time closed by a knob of epithelial cells, but later, when the hymen becomes funnel shaped, the opening is compressed laterally to form a sagittal slit.

REPORT OF A CASE

Mrs. D., aged 21, primipara, presented herself for examination on April 30, 1930. At that time the uterus was the size of a two months' pregnancy. There was discovered a septate vagina,

the septum being complete from the introitus to the vault. There were two complete cervixes, one on each side of the septum. It was thus determined that the uterus had two compartments.

On July 13, 1930, this septum was removed under general anesthesia, with an uneventful recovery. She went into labor August 4, 1930, the first pain beginning at 2 a. m. The pains were 45 minutes apart, regular and hard. An attempt was made to avoid delivery early in the seventh month by rest in bed and opiates, but the pains became more frequent and more severe. She was placed under general anesthesia for one hour beginning at 7 p. m. During the labor, the right cervix (the pregnant side) migrated into the center of the pelvis, and the left was pushed over to the left side. The station was plus 3 without any dilatation having occurred. Because of danger of rupture of the uterus by continued hard contractions against a rigid cervix, I determined to make Dührssen's incisions and do a mid-forceps delivery. The incisions were made at two, six, and eleven of the clock. The position of the head was found to be an R. O. A. A preliminary episotomy was done, forceps applied in mid position, and delivery of a viable baby ensued. The baby cried immediately and no attempts at resuscitation were required. The weight was 2 pounds, 13 ounces.

It died 10 hours later; autopsy was refused. The mother made an uneventful recovery and left the hospital on the tenth day.

These uterine anomalies vary from a simple bicornate uterus to the type pictured here.

The patient was unaware of this condition until it was found on examination. Clin-

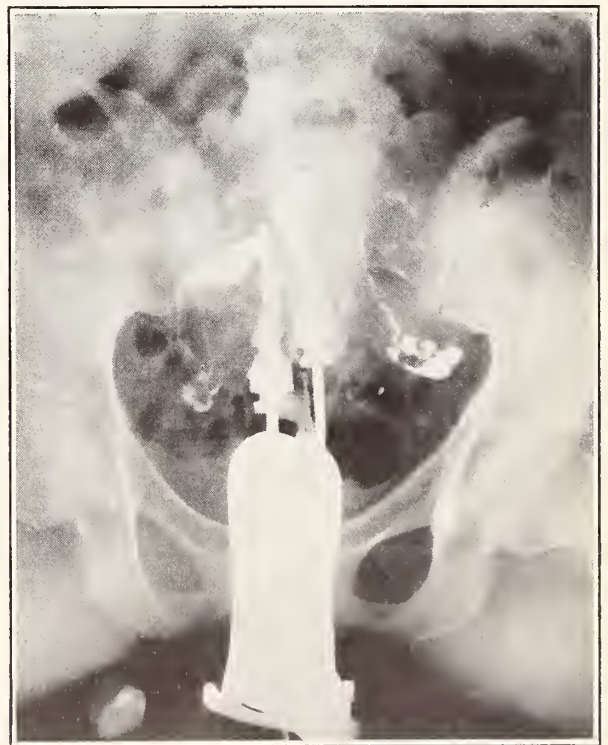


Fig. 1. The technic of taking this picture consisted of inserting a tube attached to a syringe into each cervical orifice. Eight cubic centimeters of lipiodol was injected into each uterine cavity and the exposure immediately made.

ically, it offered no difficulty except during pregnancy. The history in such a case is usually that of repeated miscarriages and bleeding from the non-pregnant side at monthly intervals.

METHYLENE BLUE IN CARBON MONOXIDE POISONING

THAD C. BROWN, M.D.
FORT COLLINS

This report of a case of carbon monoxide poisoning treated with methylene blue is made because of the apparent good results obtained from the new antidote. I feel that the after effects obtained in my case justify a report:

On March 3, 1933, I was called to see a man, white, aged 64, who had been found in a closed garage lying under the exhaust of a truck with the engine running. (This position had been taken, it was assumed, with suicidal intent.)

On my arrival, members of the Fort Collins fire department, who are thoroughly trained in emergency work, were using artificial respiration and the inhalator, supplying oxygen and carbon-dioxide mixture. They stated that respirations had ceased entirely and that they could obtain no pulse.

About the time of my arrival there was some evidence of returning respiration and a slight, thready pulse was felt. As soon as possible, I injected 10 c.c. of a one per cent solution of methylene blue intravenously. Marked improvement in respiration and pulse was noticed almost immediately. This was about one hour after the patient was first rescued from the garage.

During this time the pulse on two occasions had been almost imperceptible and respirations apparently ceased, although the inhalator was used during that period.

The patient was removed to the hospital where within thirty minutes I repeated the initial injection of methylene blue. Rapid improvement followed and the mental condition became quite clear. No further treatment was deemed necessary except a stay in bed of four days. The only untoward after effects were some gastric pains with a little nausea, which entirely disappeared after five days.

The dosage administered here is less than the advised dosage, but the results were excellent. However, in future cases, with 50 c.c. of 1 per cent solution of methylene blue, I would administer that amount at once and give 30 to 50 c.c. additional if the patient showed signs of lagging respiration or pulse weakness.

I believe that in methylene blue we have an antidote for carbon monoxide poisoning that is going to save many lives. If every

fire department, all emergency cars, and all first aid stations are equipped with methylene blue in ampoules for physicians' use, it will expedite treatment in these cases.

ATROPHIC CIRRHOSIS OF THE LIVER

PAUL A. LEE, M.D.
LA VETA

Laennec, in 1819, wrote the first adequate account of portal cirrhosis and gave the disease its name. Since that time we have had many articles written on the subject. There are several synonyms for the affliction: 1. Laennec's cirrhosis. 2. Portal cirrhosis. 3. Hobnail liver. 4. Gin drinkers' cirrhosis. 5. Alcoholic cirrhosis.

Chapman, Snell, and Rowntree of the Mayo Clinic wrote a very interesting article on "Decompensated Cirrhosis" in the Journal of the A. M. A., July 25, 1931. They gave a report on 112 cases with etiologic importance as follows: Alcohol, 52; syphilis, 49; typhoid, 18; cholecystic disease, 15; malaria, 12; arsenic, 3; hyperthyroidism, 2.

There has been a great deal of discussion in regard to the role alcohol plays in the development of portal cirrhosis. Some authors claim that the damage done to the liver by alcohol has been overestimated, while other place it at the head of the list of causative factors. However, when we consider that some individuals can drink an entire lifetime with apparently no ill effects and yet others develop cirrhosis of the liver after indulging but a few years—this merely bears out the fact that there is a marked difference in the individual tolerance for alcohol.

CASE REPORT

White male, aged 48, family history unimportant; a carpenter by trade. He claims to have had malaria at the age of 10; no other serious illness. He had been working regularly without complaint until the last three months, but had been drinking over a period of years, more so during the past year. A year ago he complained of neuritis in his right shoulder. Six months ago he fell off a scaffold; there were minor injuries to the right side of his chest. About two and one-half months ago he began complaining of tiring easily. Work which he had previously done with ease became a burden. There was no pain in

particular, but he had an occasional dull sensation in the region of the liver—a feeling of fullness—and sometimes a dull pain in the epigastrium. There was no noticeable loss of weight and no marked change in appetite. A few months ago he noticed a discoloration of his skin, a faint yellow tinge which became progressively worse. Simultaneously, his appetite decreased. His stools were clay-colored and he suffered considerably from nausea. He took 5 grains of calomel per day for several days followed by magnesium sulphate. However, his skin remained a deep yellow.

Physical examination and symptomatology: The patient was first seen by me on December 23, at which time he had a relapse. He had tried to walk and collapsed. Pulse was very weak and rapid; rate, 120; temperature, 98; blood pressure, 140 systolic, and 80 diastolic. Pupils were equal and reacted to light; there was marked yellow discoloration of the sclerae. He complained at the time of marked weakness, numbness of the extremities, loss of appetite, nausea, and distortion of taste—complained of everything tasting sweet. He perspired freely. On January 3, he became considerably weaker, and on January 4 took only a small amount of nourishment by mouth. Rectal feeding was instituted. On January 5 he lapsed into semi-consciousness, becoming completely unconscious on January 6. A uremic odor was detectable. His urine had passed freely up until this time. About 6 p. m. Cheyne-Stokes respiration set in and he died at 3 a. m. on January 7. The urine examinations had shown the following: Color, greenish yellow; contained bile; odor, characteristic; specific gravity, 1010; reaction, acid; sugar, negative; albumen, negative.

Post-Mortem Findings: Viscera, apparently normal except for liver which was very small, weighing 746 grams. Liver surface, slightly irregular; capsule, not adherent; substance, quite firm, rather hard to cut, and presenting an abnormal amount of fibrous tissue. The most conspicuous feature about the liver was its small size and marked increase of fibrous tissue of Glisson's capsule, throughout its ramifications and portal radicals. The obvious result would necessarily be obstruction to the portal circulation, which would be in direct proportion to the amount of fibrous tissue present. However, in this case we believe that toxic destruction to the liver cells was far greater than portal obstruction from fibrosis. There was no free fluid in the abdomen.

Summary and Conclusion

1. Early death without evidence of edema, ascites, or increased collateral circulation points toward the extreme toxic condition of the liver resulting in degeneration and disintegration of the liver cells.
2. History of alcoholism, which consisted of cheap moonshine whisky, bears out the source of toxicity.
3. The fact that there was no obstruction in the gall bladder or bile ducts and yet a large percentage of bile in the blood proves that the pathology must have been in the liver proper involving the liver cells.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Milk Bottle Caps

A Comparative Study of Milk in Bottles with Single and Double Caps was made by M. L. Isaacs and I. Zeiber. The following results were obtained:

1. Significant volume changes in milk may result from differences in temperatures encountered.

2. Bacteria were more numerous on the single caps than on the inner protected caps. Anerobic sugar fermenting organisms were found on single caps but not on the others. Positive tests for *B. coli* were obtained in 66 (61 per cent) in the single capped series and in 12 (13.6 per cent) of the protected cap series.

3. The bacterial counts of the surface cream averaged from 51 per cent to 121 per cent greater in the single capped bottles than in the double capped bottles.

4. *B. coli* was present with greater frequency in the surface cream of the single capped bottles than in the doubly protected bottles (47.5 per cent as compared to 10 per cent).

5. The bacterial counts of the whole milk averaged between 38 per cent and 64 per cent higher in the single capped samples.

The authors suggest that under certain conditions at least, milk in bottles sealed with the ordinary disc type cap may present a definite hazard to health.—From *American Journal for Public Health*, February, 1933.

Only Three Cents for Health

One of the most striking charts in the recent final report of the Committee on the Costs of Medical Care shows how "Our Medical Dollar" is spent. Out of a total bill of \$3,656,000,000 for 1929, only 3.3 cents in every dollar is spent for public health, \$121,000,000 to be exact. On the other hand, we spend 3.4 cents or \$193,000,000 on cults and quacks and 18.2 cents or \$665,000,000 on drugs of which \$360,000,000 is for patent medicines, for the most

part worthless medication. Physicians (29.8 cents), hospitals (23.4 cents), dentists (12.2 cents), nurses (5.5 cents), and unclassified (4.2 cents), make up the remainder of the "medical dollar."

The American Public Health Association, from exhaustive study of the subject, lays down a standard of \$2.50 per capita for public health in urban centers, and a somewhat larger expenditure in rural communities. On this basis the public health expenditures of this country should equal at least \$300,000,000, or approximately 10 cents of the "medical dollar."

How shall we ever attain a goal of reasonable public health provision for all of our American citizens? The answer, based on the experience of the past two decades, is clear. Education, organization, and demonstration are three words that tell the story of the past and give an answer to the question of the future. The American public needs the constant stimulus of some group or groups to keep up interest in any subject of common interest, even one so vital as that of the public health.—American Journal of Public Health, February, 1933.

Year 1932 Breaks Country's Health Records

The year 1932 closed with the best health record in our history. There is no indication of any untoward circumstance which would indicate an early change in the situation. However, it is at best a very hazardous undertaking to say how next year will turn out.

An outbreak of virulent influenza is entirely possible at any time, and that might change the entire complexion of the mortality of 1933. Health authorities have expected such an outbreak this year in view of the past history of influenza. It was fortunately not developed. But in some instances these epidemic outbreaks do register after a delay of some months, and that is something to keep in mind for 1933.

The meteorological conditions will also play a very important part in the health picture of next year. These last few years have been extraordinarily favorable in that regard. I have no idea as to what the weather conditions will be in the future.

Much will also depend on the continued efficiency of the federal, state, and municipal health services. If the present tendency to curtail budgets continues or is accelerated, there should be a very decided reflection in the death rates from certain of the infectious diseases. It would be the worst possible economy for communities to endanger their vital resources through parsimony with health expenditures.

Certain advances in medical science make it very dangerous to predict recurrence of epidemic diseases on the basis of past performance. This is especially true of diphtheria. This disease has been declining very remarkably because of the wide-spread immunization of children with either toxoid or toxin-antitoxin. The effect of this practice has been to completely modify the cyclical outbreak of the disease.

In the past, diphtheria, like measles, whooping cough, and scarlet fever, has recurred in fairly well-defined cycles. The peaks in the death-rate have occurred with much regularity at intervals of about seven years. Measles, whooping cough, and diphtheria have had secondary peaks every three or four years. Influenza has shown a peak in the death-rate every three years since 1920, that is, in 1923, 1926, and 1929. The year 1932 has, however, passed without any serious outbreak. This may have been merely deferred for some months and may occur in 1933. Pneumonia, closely related to influenza, is expected to follow about the same course or cycle as influenza. So far this year the lowest pneumonia mortality ever recorded has been observed.

The continued drop in tuberculosis mortality in 1932 was particularly striking and the most unexpected of all favorable items in the mortality picture. It can only be explained by the fact that community facilities, including hospitalization and the feeding and shelter of the unemployed, have been continued on a very effective basis. If these are continued, there is no reason to expect an increase in tuberculosis deaths, especially since it appears that the forces at work in the community over the last twenty-five years have established a suffi-

cient momentum to more than offset the unfavorable effects of the depression.

I do not believe that we have reached the peak in the cancer death-rate, which will probably continue to rise in 1933. Very large increases in the cancer mortality were recorded in the last two years among industrial policyholders. On the other hand, the cancer death-rates for a group of cities showed a slightly lower rate in 1931 than 1930. It is difficult to understand why there should be this difference in the situation as between wage earners, on the one hand, and the general population, on the other. It will be very interesting to see what the figures for 1932 in the general population show.—Dr. Louis I. Dublin.

BOOK REVIEWS

International Clinics. A quarterly of Illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest. By leading members of the Medical Profession throughout the world. Edited by Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Md. With the collaboration of Francis Gilman Blake, M.D., Yale University, New Haven, Conn., Vernon C. David, M.D., Rush Medical College, Chicago, Ill., Dean Lewis, M.D., Johns Hopkins University, Baltimore, Md., John W. McNee, M.D., University College Hospital, London, Eng., John H. Musser, M.D., Tulane University, New Orleans, La., E. Rehn, M.D., University of Freiburg, Germany, Arthur L. Bloomfield, M.D., Stanford University, San Francisco, Calif., Campbell P. Howard, M.D., McGill University, Montreal, Canada, W. McKim Marriott, M.D., Washington University, St. Louis, Mo., George Richards Minot, M.D., Harvard University, Boston, Mass., Walter W. Palmer, M.D., Columbia University, New York, N. Y., and Russell M. Wilder, M.D. The Mayo Foundation, Rochester, Minn. Volume 1. Forty-third series, 1933. Philadelphia, Montreal, London: J. B. Lippincott Company. 305 pages. Price \$3.00.

This volume contains several clinical lectures and original articles divided into five groups: Medicine, Surgery, Neurology, Clinical Pathology, and Recent Progress in Medicine and Surgery. Illustrating these articles and lectures are many plates, charts, graphs, and one colored plate, the frontispiece.

In the section on Medicine is an article by Arthur L. Bloomfield, M.D., of San Francisco, who discusses "The Indications for the Use of Special Tests by the Practitioner" at length. He points out the advantages of the various tests, the conditions indicating their uses, and some of the contraindications or occasions when the tests are unnecessary. Curtis F. Burnham, M.D., of Balti-

more, has presented a very inclusive article on the "Evaluation of Radium as a Therapeutic Agent." "Bromid Intoxication," by Chas. W. Wainwright, M.D., of Baltimore, is a thorough description of several cases of this illness, giving not only etiology, symptoms, and diagnosis, but also the treatment employed.

The section on Surgery includes five separate articles, one of which, by Alan C. Woods, M.D., of Baltimore, concerns "Tuberculosis of the Eye," and is illustrated by several plates and the colored frontispiece. An article on the causes and treatment of shock by Alfred Blalock, M.D., of Nashville, presents valuable additions to this interesting subject. Under the heading of "Peripheral Arterial Diseases," Arthur W. Allen, M.D., of Boston, has presented an inclusive, helpful summary of the subject.

The section devoted to Neurology contains a lecture by Frank R. Ford, M.D., of Baltimore, on the symptom, tremor. He differentiates the various types of tremor and gives a brief discussion of each as to its origin and significance. "Progressive (Central) Muscular Atrophy," by Hugh J. Morgan, M.D., of Nashville, is a concise consideration of the disease, amplified by several illustrative plates.

The section on Clinical Pathology consists of a clinical pathologic conference on a case of heart failure reported at length by Louis Hamman, M.D., and Arnold R. Rich, M.D., of Baltimore.

The final section on Recent Progress in Medicine and Surgery includes notes of varying length on the major divisions of both medicine and surgery. The attempt is successfully made to bring each major consideration briefly and concisely up to date. The authors are A. Cantarow, M.D., of Philadelphia, and Donald C. Balfour, M.D., with Frederick R. Harper, M.D., of Rochester, Minnesota.

In conclusion, this volume brings to the reader accurate, concise and useful observations and discussions of recent developments in many branches of the science of medicine and is worthy of the attention and time of the practitioner who wishes to keep abreast of the advances in medicine.

A. M. WOLFE.

The Nature of Human Conflicts or Emotion, Conflict and Will. An objective study of disorganization and control of Human Behaviour, by A. R. Luria, Professor of Psychology at the Academy of Communistic Education; Research Associate, State Institute of Experimental Psychology, Moscow. Translated from the Russian and edited by W. Horsley Gantt, Phipps Psychiatric Clinic, Johns Hopkins University; Collaborator in Prof. Pavlov's Laboratory, Institute of Experimental Medicine, Leningrad, 1924-29. With a foreword by Adolf Meyer, Professor of Psychiatry, Johns Hopkins University. New York: Liveright, Inc., Publishers. 431 pages. Price \$4.00.

"The researches described here are the results of the experimental psychological investigations carried on at the State Institute of Experimental Psychology, Moscow, during the period 1923-1930. The chief problems of the author were an objective and materialistic description of the mechanism lying at the basis of the disorganization of human behavior and an experimental approach to the laws of its regulation."

The author makes an objective study of certain types of "conflicts." The subjects of the experiments were university students taking their examinations, students appearing before a commission for possible expulsion in connection with their political leanings, criminals, and suspected criminals. These subjects were selected because

of the traumatic situations to which they were exposed and because of the "affect" to which the situations were expected to give rise. Other subjects were persons under post-hypnotic suggestion, neurasthenics, aphasics, and children.

The laboratory investigations were practically identical in all instances. In the routine experiment "there is given a word-stimulus, to which the subject must answer by another word, and simultaneously he presses with the fingers of the right hand the pneumatic bulb, connected with a recording drum." Study is made of the delay in verbal and motor response and of the curve resulting from the hand movements. Such stereotyped material might be expected to give meager results, but such is not the case, and the author's data and conclusions are surprisingly rich.

The book represents a significant contribution to the objective study of the mental sciences. To the translator, W. Horsley Gantt, much credit is due for the excellence of this English edition.

C. S. BLUEMEL.

Criteria for the Classification and Diagnosis of Heart Disease. By the Criteria Committee of the Heart Committee of the New York Tuberculosis and Health Association, Inc. Joseph H. Bainton, M.D., Arthur C. DeGraff, M.D., Robert L. Levy, M.D., Harold E. B. Pardee, M.D., Chairman. Approved by the American Heart Association. Third Edition. New York Tuberculosis and Health Association. New York. 1932. 131 pages.

This book is one of the most valuable handbooks a practitioner may use. It gives the high points of diagnosis of heart disease from the angles of the history, the physical examination, the x-ray, and the electrocardiogram.

It is a combination in one cover of the original work covering the clinical side and the two more intricate booklets covering the x-ray diagnosis and the electrocardiographic diagnosis of heart disease.

Many changes have been made from the first edition, particularly in the way of additional listings for the classification under the headings of "A. Etiological," "B. Anatomical," "C. Physiological." The "D. Functional" classification remains unchanged. The sections on radiologic diagnosis and interpretation of electrocardiograms are very little changed, mostly in the way of terminology.

The most marked revision is in the classification of "Thyroid Disease" under Etiology.

EDGAR DURBIN.

International Clinics. A quarterly of illustrated clinical features and articles. Vol. II. Forty-third series. Philadelphia: J. B. Lippincott Co. June, 1933.

This volume of the International Clinics opens with a discussion of a comparatively new clinical entity, Hyperinsulinism, in which pancreatic abnormalities are discussed. More or less arbitrary figures are given for the normal blood sugar levels and lesions of the pancreas, such as adenoma and hyperplasia of the isle tissue, described. Recently the reviewer found a blood sugar of 40 mg. per 100 c.c. of blood in a male suffering from multiple furuncles. There were no symptoms complained of such as are seen in definite hyperinsulinism though the blood sugar value was much lower than the average in the cases reported.

Vital capacity and residual air are partially discussed in their relation to Pulmonary Hypertension in a clinic on hypertension of the lesser circulation. Based upon physiological criteria, an

explanation is offered why emphysema and bronchial asthma are not likely to produce true pulmonary hypertension with its end result—the syndrome of pulmonary circulatory failure (Ayerza's Disease). Conditions which give rise to pulmonary hypertension are listed as mitral stenosis, passive congestion of the lungs from other causes, congenital heart disease, and extensive fibrosis of the lung whether produced by pneumoconiosis, tuberculosis, or non-tuberculous infections. The possibility of prolonged vasoconstriction in the lesser circulation, as an etiological factor, is considered as very rare indeed.

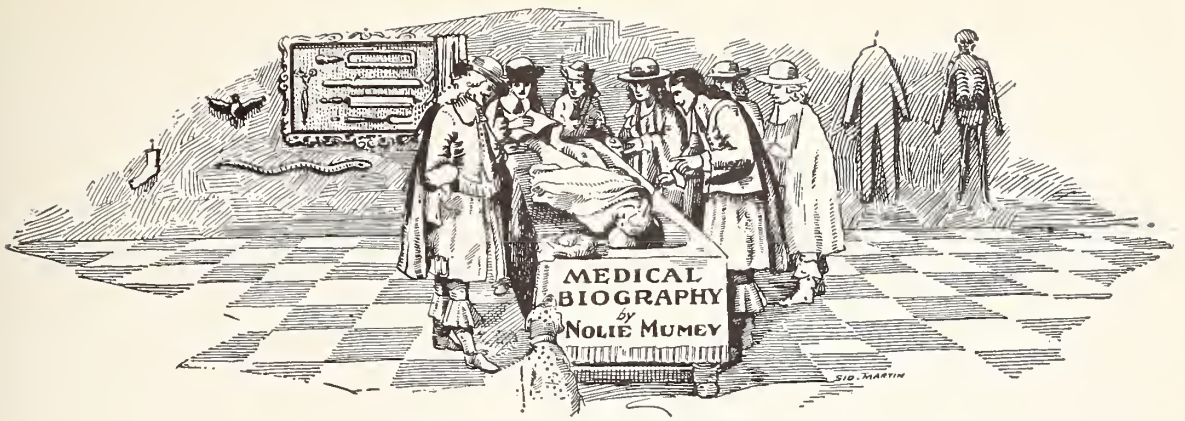
An article on Stenosis of the Coronary Arteries is without particular merit except that it may be utilized to emphasize one simple fact. Coronary sclerosis after middle life should be looked upon as being, in a sense, physiological, and accounts for much of the chronic myocarditis common to this period of life.

A Practical Consideration of the Pathological Physiology of the Circulation is comprised of essays on Dyspnea as a Symptom of Disease, Cyanosis, and Edema. This constitutes a symposium which may be read with profit, and particular attention is directed to the summary dealing with cyanosis. "Cyanosis occurring in acute disease is much to be feared and should be corrected by all means in our power, . . . that if this should not be done vasomotor collapse is almost sure to follow." The oxygen tent in pneumonia with drugs, such as caffeine-sodium benzoate, to maintain peripheral circulation, will serve as a practical demonstration.

A Discussion of Hypertension incorporates the subjects of The Causes, Clinical Manifestations, Prognosis, and Treatment. All but one of these is treated with the restraint in keeping with our lack of knowledge of the subject. Apparently it is not universally accepted that the cause of hypertension, excluding that secondary to known renal disease and pregnancy, is as yet unknown, and that it is the consensus of opinion that secondary vascular changes, wherever located, are the effect and not the cause. The diversity of opinion regarding etiology indicates that much more new discoveries are necessary to add materially to our present knowledge. A reviewer should exercise restraint too. However, one's inability to lay an egg does not necessarily exclude him from judging if it be good or bad. One point seems to be common to many clinicians of experience, namely, that rest and sedatives are of great importance in the treatment of hypertension, particularly early, and that many of these cases are of a type peculiarly susceptible to psychic and emotional stimuli, thereby emphasizing a vasomotor factor, but whether this is cause or effect has not been determined.

There are short discussions of Abnormal Uterine Bleeding and the Physiology of Menstruation, also a case report of Lymphogranuloma of the Epidural Space. The reviewer recalls a case of compression of the spinal cord by an extradural tumor which proved to be Hodgkin's Disease extending from the mediastinum. An essay, Standards in Therapeutics, is rather verbose. The technic of the Roentgen Diagnosis of Interlobar Pleurisy is well illustrated and discussed. Two cases of Subacute Bacterial Endocarditis are presented in detail as a clinical pathological conference. Under the heading, Recent Progress in Obstetrics and Pediatrics, is a discussion of Heart Disease in Pregnancy, and short consideration of Epilepsy, Lead Poisoning, Hirschsprung's Disease, Mortality of Meningococcus Meningitis, and Treatment of Influenzal Meningitis.

WILFRED S. DENNIS.



SILAS WEIR MITCHELL

(Continued from July Issue)

Dr. Mitchell always wrote the first draft of his manuscripts by hand even after he had developed a slight tremor. He described his method of working as follows: "I have everything set in type and study the effects from galley proof. Then I insist upon a complete copy, page for page, of the entire work, and when I get that in hand I begin to see my mistakes and get a general effect of the work." He stated he had four or five different copies of the same book printed several times before it went to the Century Company for publication.

In recognition of his literary attainments, Weir Mitchell was chosen president of the Franklin Inn Club, which was composed of literary men and artists of which a limited number were members. He had the acquaintance and friendship of such men as Charles Eliot Norton, Oliver Wendell Holmes, and Owen Wister.

Some of his important novels worthy of mention are: "The Children's Hour," 1866, is a series of stories written in 1864 but not published in book form until two years later. These stories were favorites in many nurseries and were written to aid the Sanitary Commission Fair in Philadelphia. They have gone through several editions. Someone has said there is a good neurological clinic in every one of Dr. Mitchell's novels

for they portray vivid description of doctors and patients.

"The Wonderful Stories of Fuz-Buz the Fly and Mother Grabem the Spider," 1867, was published for the purpose of aiding the Children's Hospital.

"In War Time," 1885, describes the moral deterioration of character. It was written in Newport, and gives a good description of Philadelphia's social life during the Civil War. This was Mitchell's first novel and was first published in the Atlantic Monthly in 1884.

"Roland Blake," 1886, is a story dealing with hysteria. The heroine of this novel was named Wynne, which happens to be the name of Hugh Wynne's cousin and a rival in the latter story. The plot was founded on the story of a Virginia woman who was a spy in the Civil War under the guise of a man. "Nature gives to one man curiosity and little means to gratify it. To another she gives desire to know and the organization which can answer its demands. Then she has made an observer and a friend to whom, with discreet reluctance, she tells her secrets. Yet nothing entirely explains one human being to another, or, indeed, to himself." It contains good philosophy throughout the narrative. "When a man has but one swan in his goose-pond it is rather sad to hear a treacherous quack, quack."

(To be continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

New State Society Cancer Committee

THE COLORADO STATE MEDICAL SOCIETY has had Cancer Committees off and on for the past six or eight years. These have been appointed at the request of the American Society for the Control of Cancer. Up to date no particular advantage seems to have been gained, probably for the reason that a definite program of work has never been adhered to, and for the additional reason that such undertakings as there were are seen to have been mapped out along ineffective paths.

Dr. John M. Flude, Field Representative for the American Society for the Control of Cancer was in Denver in the late spring urging creation of another Cancer Committee by our Society, and it appears that the American Society for the Control of Cancer is now embarking upon a new line of endeavor, whose broad purpose is education of the profession, especially with regard to the early recognition of cancer and the proper methods of treatment of cancer in its various situations in the body. As we understand it, they wish to continue also the education of the public.

It is their desire that the Committee of this Society be organized promptly and that after it shall have received instructions and literature from the American Society, it will outline a campaign plan during the summer months which will be brought before the House of Delegates at the September meeting for approval. We see in this perhaps an admission that past plans of the American Society have been subject to criticism by the profession at large because the initiative in many cases arose with the individual doctors and did not have the stamp of approval of the State Society. The new plans should be such that no personal aggrandizement can be derived by any member of the Committee.

Among other things, it is known that County Societies will be asked to have cancer programs at their meetings, and perhaps there will be speakers provided by the Committee to introduce the subject to each County Society at a meeting some time during the year, preferably in the early fall. It has been asked also that the Committee be

fairly large, so that it may be representative of a number of specialties and several districts of the state. The Committee as appointed will be seen to have a preponderance of Denver men which is considered desirable in order that quorum meetings may be had when needed.

Following is the Committee appointed by the President to act in the interim between now and the annual meeting, at which time it is hoped that this Committee or a like one will be continued and its plans acted upon:

Lyman W. Mason, Chairman, Denver; William H. Halley, Denver; Philip Hillkowitz, Denver; C. W. Maynard, Pueblo; Kenneth D. A. Allen, Denver; W. W. Wasson, Denver; W. W. Haggart, Denver; H. S. Finney, Denver; John B. Hartwell, Colorado Springs.

FRANK B. STEPHENSON, M.D.,
President.



A Few 1933 Dues Are Still Delinquent

IN this difficult year of 1933 the Board of Trustees and other officers of both the State and the various county societies have been lenient to an extreme in the matter of enforcing payment of annual dues. It has been necessary to extend additional time to many physicians who value their society membership and who were seriously embarrassed by bank holidays and other financial emergencies.

But there are limits, even to the powers vested in the Trustees of the State Society. Reports to show who is, and who is not, a member in good standing on August 31, 1933 (the end of the Society's fiscal year), cannot be falsified. Reports as of that date are the reports to go before the House of Delegates at the Annual Session. Further, the By-Laws specifically bar from the annual session all members whose dues are not paid. The Trustees have no power to rule otherwise. And the general program, the exhibit lists, the other announcements in this issue of Colorado Medicine should prove that every member will want to attend the Colorado Springs meeting.

This little reminder is therefore addressed to those few who still have failed to pay their 1933 county and state dues. The Society needs you—and you need the Society.

SIXTY-THIRD ANNUAL SESSION OF THE COLORADO STATE MEDICAL SOCIETY

Colorado Springs, September 14, 15, 16, 1933

Official Call

To the Officers, Delegates, Committeemen and Members of the Colorado State Medical Society; Greeting:

The Sixty-Third Annual Session of The Colorado State Medical Society Will Be Held in Colorado Springs, Colorado, on Thursday, Friday and Saturday, September the Fourteenth, Fifteenth and Sixteenth, Nineteen Hundred and Thirty-Three.

The House of Delegates Will Convene at Nine-Thirty A. M., Thursday, September the Fourteenth, and Subsequently as Ordered.

The General Scientific Assembly Will Convene at Two P. M., Thursday, September the Fourteenth and Subsequently According to the Program.

FRANK B. STEPHENSON, M.D.,
President.

Attest: HARVEY T. SETHMAN,
Executive Secretary.

GENERAL PROGRAM

THURSDAY, SEPTEMBER 14, 1933

MORNING

(City Auditorium)

9:30 to 12:30—First Meeting House of Delegates.

AFTERNOON

(City Auditorium)

Opening Scientific Session

2:00—Call to Order; installation of Gerald B. Webb, M.D., as President.

2:15—Obstetric Mortality.—E. D. Burkhard, M.D., Pueblo.

2:30—Obstetrics in the Small General Hospital.—N. L. Beebe, M.D., Fort Collins.

2:45—Cervical Caesarean Section.—P. W. Whiteley, M.D., Denver.
Discussion.

Intermission, 15 minutes.

3:45—Fifteen Years of Country Practice.—W. B. Hardesty, M.D., Berthoud.

4:00—The Early Recognition and Treatment of Malignancy of the Skin.—G. P. Lingenfelter, M.D., and J. V. Ambler, M.D., Denver.

4:15—Primary Carcinoma of the Lung, Simulating Tuberculosis.—I. D. Bronfin, M.D., Denver.

4:30—Carcinoma of the Oesophagus.—C. O. Giese, M.D., Colorado Springs.

4:45—Sarcoma of the Cervix Uteri.—E. W. Perrott, M.D., Denver.
Discussion.

5:30—Adjourn

EVENING

(City Auditorium)

7:30—Second Meeting House of Delegates.

7:30—Clinical Meeting Sponsored by the Colorado Tuberculosis Association.

1. Our Present Method of Conducting Clinics, Our Aims and Our Difficulties.—C. O. Giese, M.D., Colorado Springs.

2. Diagnosis of Childhood Tuberculosis—
A. The Tuberculin Test, Its Value and Limitations.—H. J. Corper, M.D., Denver.

B. The X-ray in the Diagnosis of Childhood Tuberculosis, with a presentation of typical films.—Kenneth D. A. Allen, M.D., Denver.

C. History Taking and Physical Examinations.—J. B. Crouch, M.D., Colorado Springs.

D. The Care and Treatment of Children With Tuberculosis.—Johanna Gelien, M.D., Denver.

FRIDAY, SEPTEMBER 15, 1933

MORNING

(City Auditorium)

9:00—Therapeutic Uses of Urinary Protease.—Richard W. Whitehead, M.D., Denver.

9:15—The Clinical Application of the Ketogenic Diet.—R. K. Dixon, M.D., Denver.
Discussion.

9:45—The Food Factor in Allergy.—George Piness, M.D., Los Angeles, Calif.
Discussion.

10:30—Brain Abscess.—C. H. Darrow, M.D., Denver.

10:45—Brain Tumors.—J. R. Jaeger, M.D., Denver.

11:00—Narcolepsy.—L. E. Daniels, M.D., Denver.
Discussion.

11:30—Improved Surgical Prognosis in Simple Glaucoma.—Wm. H. Crisp, M.D., Denver.
Discussion.

12:00—Adjourn.

12:30—Official Luncheons (Antlers Hotel)

AFTERNOON

(City Auditorium)

2:00—Presidential Address.—Gerald B. Webb, M.D., Colorado Springs.

2:30—Surgical Indications in Head Injuries.—J. Jay Keegan, M.D., University of Nebraska, Omaha; Guest of the Colorado Neurological Society.
Discussion.

3:15—Cardiac Syphilis; A Clinical Study.—C. T. Burnett, M.D., and C. A. Rymer, M.D., Denver.

3:30—Coronary Thrombosis; The Acute Indigestion of Coronary Thrombosis and the Electrocardiograph.—Maurice Katzman, M.D., Denver.

3:45—The Surgical Treatment of Adhesive Pericarditis.—John M. Foster, Jr., M.D., Denver.

Discussion.

4:15—Avoidance of Pulmonary Complications from Intravenous Arsenicals.—George C. Shivers, M.D., Colorado Springs.

4:30—The X-ray Determination of Small Intestine Obstruction without Use of Opaque Media.—K. D. A. Allen, M.D., Denver.

Discussion.

5:00—Adjourn.

EVENING

(Broadmoor Hotel)

6:30—Presidential Reception.

7:00—Annual Banquet.—Speaker, Olin West, M.D., Chicago; Secretary and General Manager, American Medical Association; Subject: Preserving the Professional Aspect of Medical Practice.

9:30—Dancing.

SATURDAY, SEPTEMBER 16, 1933

MORNING

(City Auditorium)

9:00—Osteoporosis of the Carpal Bones.—Duval Prey, M.D., Denver.

9:15—Recurrent Dislocation of the Shoulder.—J. S. Norman, M.D., Pueblo.

Discussion.

9:45—The Use of Local Anesthesia in Treatment of Fractures, Together with Ambulatory After Care.—Claude R. G. Forrester, M.D., Chicago; Guest of the Rocky Mountain Orthopedic Club.

Discussion.

10:30—Anatomical and Functional Damage to the Adrenal Glands in Visceroptosis, Especially in Renoptosis.—O. S. Fowler, M.D., Denver.

Discussion.

11:00—Adjourn.

11:00—Third and Final Meeting, House of Delegates.

AFTERNOON

(City Auditorium)

2:00—Business Session:

a. Report of Committee on Necrology.

b. Summary of the Proceedings of the House of Delegates.

c. Introduction of Newly-Elected Officers.

2:30—The Relationship of Pharmacy to Medical Economics.—Paul G. Stodghill, R. Ph., Denver; Guest from the Colorado Pharmacal Association.

3:00—Differential Diagnosis of Lesions of the Colon.—L. S. Faust, M.D., Denver.

Discussion.

Intermission, 15 minutes.

3:45—Transurethral Resection of Bladder Neck Obstructions.—Budd C. Corbus, M.D., Chicago.

Discussion.

4:30—Tumors of the Thyroid Gland.—Paul M. Ireland, M.D., Pueblo.

4:45—Problems of Unemployment and Depression.—George S. Johnson, M.D., Denver.

5:00—Blood Pictures in Average Healthy Infants During the First Six Months.—A. H. Washburn, M.D., The Child Research Council, University of Colorado, Denver.

Discussion.

5:30—Final Adjournment.

GENERAL SCIENTIFIC EXHIBITS

Since the list of exhibitors with their respective titles has not been completed up to the time of going to press with this issue of Colorado Medicine, it will not be published until the final pamphlet program for the Session is issued.

The Sub-Committee on General Scientific Exhibits wishes to announce that there is space still available for several good scientific exhibits. Applications for exhibit space should be sent in promptly not later than August 20. Such applications may be addressed either to a member of the Committee or to the Executive Office of the Society in Denver. The Committee members and their addresses are: C. E. Harris, Chairman, Woodmen; Maurice Katzman, 402 Republic Building, Denver; F. M. Heller, 507 North Main St., Pueblo.

ROENTGENOLOGICAL EXHIBITS

A preliminary list of titles and exhibitors for the Roentgenological Exhibition is here presented, probably to be expanded slightly for the final program. They are presented in the order of their receipt by the Committee:

Childhood Tuberculosis.—I. D. Bronfin, Denver.

The X-Ray Determination of Small Intestine Obstruction Without the Use of Opaque Media.—K. D. A. Allen, Denver.

A Case of Patent Urachus.—G. A. Unfug, Pueblo.

Tumors of the Kidney.—H. T. Low, Pueblo.

Case with Multiple Anomalies of the Spine.—St. Mary's Hospital, Pueblo.

Thoracoplasty: Films Before and After Operation.—L. R. Allen, Colorado Springs.

Malignancy in the Lungs: Primary and Metastatic.—Union Printers Home, Colorado Springs.

Cystic Kidneys.—T. Leon Howard and John M. Lipscomb, Denver.

Stricture of the Ureter.—Harry H. Wear, Denver.

Ventriculograms Illustrating Diseases of the Brain.—J. R. Jaeger, Denver.

Cholecystography by the Oral Method of Administration of Tetiothalein Sodium.—R. K. Dixon and L. S. Faust, Denver.

Perthes' Disease of the Hip.—Drs. Newcomer, Newcomer and Conyers, Denver.

Changes in the Position and Function of the Stomach and Duodenum Resulting from Rise of the Paralyzed Hemidiaphragm Following Left Phrenicoexairesis.—H. Schwatt, Spivak.

GOLF

The annual golf tournament this year will be conducted on Thursday, September 14. Golfers who are not delegates and who are not otherwise needed at the opening meeting of the House of Delegates will play during the morning. Those concerned with the delegates' meeting will play during the afternoon. All details of the tournament are in charge of the Committee on Arrangements, and inquiries should be directed to the Chairman, Dr. John B. Crouch, Ferguson Building, Colorado Springs.

Our Advertisers Are Saving YOU Money!

REPRODUCED below is a plea for support of its advertisers that recently appeared in the Kentucky Medical Journal. Eliminate that word "never" from the clause "it has never cost the physicians of the State a penny" and it applies verbatim to your own Journal, Colorado Medicine. Will you read it, think it over, and do your best to act accordingly? Colorado Medicine will thank you, and in the end it will save YOU money. Here it is:

"In the protracted fight for support to weather the storm of prolonged economic depression, business of every character is forced to check up closely on disbursements. Expenditures for any given purpose are likely to be continued so long as income from that particular source at least equals outgo. But, when this ceases to be the case, when the balance is in the red, elimination is almost certain to be the prompt result. And one of the first things to be eliminated is most likely to be non-paying advertising.

"Our advertisers have really been paying for the Journal since its inception. It has never cost the physicians of the state a penny, although we have never failed as yet to publish any article or report submitted, which possessed any real worth. This has been made possible solely by the volume of advertising secured.

"During the years of prosperity we did not increase our advertising rates; so, in these days of adversity, we cannot reduce them without correspondingly reducing space available for reading matter.

"We are, therefore, urging all member physicians to read the advertising pages of the Journal and to give their patronage, wherever and whenever practicable, to the dealers and manufacturers who have so generously supported our publication. It is only through such patronage of our advertisers by members of the profession that we can hope to continue the Journal in its present size and be so able to take care of all the worthwhile material submitted for publication."

MEDICAL SOCIETIES

BOULDER COUNTY

Drs. J. R. Arneill and J. S. Bouslog were guest speakers at the regular monthly meeting of the Boulder County Medical Society held at the Boulderado Hotel, Thursday, June 8. Dr. Arneill presented a paper on "Some Present Day Digestive Problems," and Dr. Bouslog read a paper on "Roentgen-Ray Studies of the Stomach." Both papers were discussed by the members of the Society.

MARGARET L. JOHNSON,
Secretary.

* * *

LARIMER COUNTY

The Larimer County Medical Society held their regular monthly meeting June 7th at the home of Dr. Roy L. Gleason. Dr. G. P. Lingenfelter and

J. V. Ambler were the principal speakers at the meeting.

Dr. Kenneth D. A. Allen of Denver was guest speaker at the regular meeting of the Larimer County Medical Society held July 5 at the Northern Hotel, Fort Collins. Dr. Allen read an interesting paper on "Intestinal Obstruction."

DUANE F. HARTSHORN,
Secretary.

* * *

NORTHWESTERN COLORADO

The Northwestern Colorado Medical Society held their regular meeting June 29 at Hayden. Drs. H. H. Wear and T. D. Cunningham of Denver were the principal speakers. Dr. Wear delivered a paper on "Transurethral Resection" and T. D. Cunningham talked on "Chronic Arthritis."

DUANE TURNER,
Secretary.

* * *

WELD COUNTY

Dr. Louis B. Faust of Denver was the guest speaker at the regular monthly meeting of the Weld County Medical Society held at Greeley Hospital, June 5, 1933. Dr. Faust gave an interesting and educational lecture on "Diagnosis and Treatment of Colitis" and illustrated his talk with lantern slides.

TRACY D. PEPPERS,
Secretary.

Obituary

Walter E. Hays

Dr. Walter Ennis Hays, member of the Northeast Colorado Medical Society, died July 3, at Mercy Hospital. Dr. Hays was born in Albany, New York, in 1879. He attended school in Albany and later completed a course at the Union College at Schenectady. His medical degree was obtained at the Albany Medical College in 1905. Dr. Hays practiced medicine in New York City from his graduation in 1905 until he moved to Colorado in 1917. He was physician at the Minnequa Hospital and camps until 1921, when he located at Sterling and practiced there until the time of his death.

Dr. Hays was a member of the Northeast Colorado Medical Society and the Colorado State Medical Society, and a Fellow of the American Medical Association.

Dr. Hays is survived by his widow, Mrs. Mary Lansing Hays, two sons, Donald and Alan, and two brothers, Cornelius Hays of New York City and Leland Hays of Los Angeles.

WOMAN'S AUXILIARY

EL PASO

Interesting and varied entertainment will be provided for all women and members of physicians' families who attend the Colorado Springs session, both through the Women's Auxiliary of the State Society and the entertainment plans of the El Paso County Medical Society. Full details of the program will appear in the Year Book. The dates of the meetings are September 14, 15 and 16.

LOUISE M. LIDDLE,
Corresponding Secretary.

COLORADO TWICE HONORED BY NATIONAL AUXILIARY

At the national convention in Milwaukee, in June, Mrs. T. Mitchell Burns of Denver was elected recording secretary. This is a great honor conferred upon Mrs. Burns, and she is most deserving. She was one of the organizers of the auxiliary here and throughout has proved her outstanding ability in the many offices she has held—including state corresponding secretary (1926-1927), state president (1931-1932), and president of Denver County Auxiliary (1928-1929). At present she is deeply interested in the Physician's Loan Fund, having been instrumental in instigating it and drawing up the plans for it, which plans will be presented to the Board of Trustees at their next meeting. No better representative for a national office could be chosen than Mrs. Burns.

Mrs. John W. McCaw was the second to receive an honor, having been appointed chairman of the revisions committee and of the "Jane Todd Crawford Memorial" committee. This is the second national office Mrs. McCaw has held, as last year she was National Parliamentarian. She was also parliamentarian for Colorado during Mrs. Gengenbach's presidency and is at present president-elect of Denver County Auxiliary.

Following is an account of the National Convention sent in by Mrs. T. Mitchell Burns:

"The Milwaukee convention was generally voted a splendid success. There were 843 ladies registered. There was a representative from Hawaii, one from Europe, and one from Canada. There were six from Colorado: Mrs. John McCaw, Mrs. Claude Cooper, Mrs. Harry J. Corper, Mrs. C. H. Darrow, all from Denver, and Mrs. C. A. Ringle from Greeley.

"The hospitality of the city of Milwaukee and its doctors and their families could not be excelled. We were lunched and dined at the beautiful clubs; drives were planned for the afternoons over miles of wonderful country.

"The luncheon for the Past Presidents was specially interesting with talks by many of them. Thirty-five auxiliaries sent delegates and reports. New York State reports one county organized and several others interested. The Memorial Service for Mrs. Walter Jackson Freeman was very impressive, the entire assembly of women feeling a great loss at her passing.

"Mrs. James B. Percy in the difficult roll of succeeding Mrs. Freeman, and splendidly endeavoring to carry on the work she had planned, gave an excellent report. The address of Mrs. James Blake, the incoming president, was to the point and very inspiring. She stresses united action—team work, not money. She considers the year's work a picture which she is painting, and she asks each one of the members of the auxiliary to take a brush and help in a great or small way the success of the picture."

NATIONAL PRESIDENT'S REPORT

It is a great privilege to live in this momentous period of our world's history. Nations, states, and individuals discard old customs, laws, and conventions. Even the sacred ethics of the medical profession are being questioned by a skeptical world. On the heels of an era of unprecedented prosperity and unbridled speculation comes a period of depression, from which we have not as yet emerged. No individual escapes; no group or organization is immune. Only the strongest and most prudent survive. Those things which are noble and good, like royal metal, should pass un-

scathed through the revolutionary fire. Each one of us can contribute her share toward that end by steadfast adherence to her ideals, even though this does not seem to be an era of rapidly changing ideas and ideals. It is good for us to come together for these annual meetings and discuss our problems. Every one of them is of interest and importance to the members of our auxiliary. It is well for us to consider them carefully, decide for ourselves what is the right and honest course to pursue. The weight of our united opinion is powerful, and I have the conviction that, standing together, deciding our problems very honestly, fairly, and unselfishly, we can find a solution for all our auxiliary questions.

In our democratic plan of medical and auxiliary organization, the county medical society is the basic unit. It is the only door through which admission may be secured to the State and American Medical Association Auxiliary. It is the sole judge of the applicant's membership qualifications. It is the local representative of the State and National organizations. It is the most important unit and therefore has certain very definite and grave responsibilities.

When the County Society Auxiliary fails, the State and National groups fail. The State Auxiliary is strong, active, and achieving only when its component County Auxiliary units seriously assume and discharge their responsibilities. The parent organizations are dependent upon their basic units. Too often, I believe, is this fundamental fact overlooked or ignored by the members and officers of both State and County Auxiliaries.

I am a firm believer in State's Rights. I am going to stress the Educational Program, the Public Relations Program, the advance of Hygeia for each individual state, and a system of press and publicity work among members of neighboring State Auxiliaries.

I believe every state and county president should make a systematic search for wasted effort in her county organization, should try to fill gaps, eliminate all overlapping in program or work. It may be regarded as axiomatic that wherever mass activity or interest is concerned, a group must either lead or be led. The lead in all things with which medicine has close contact, and in which medical science or practice plays the vital role, should be taken by medical organizations and their lay representatives, the auxiliary.

Our imperative need today is an undistorted sense of values, constructive thought, logical reasoning, and sound judgment, combined with common sense and team work. We as doctors' wives know that to no one is life level all the way—there are depths to go through and heights to climb, and we need courage and inspiration.

If as Shakespeare has remarked, "All the world's a stage and all the men and women merely players" thereon in a drama of mixed tragedy and comedy, let us resolve to "act well our part, for there all honor lies." And as the curtain rolls down on our very pleasant, happy, and profitable Milwaukee meeting, let us each remember our own state, our county—every state and every county in this great country of ours is our stage. You, all auxiliary members, and I are the players. The curtain is slowly rolling and unfolding a new year. As your stage manager you will always find me ready to prompt your work, shift the scenery, start the orchestra, or any other thing I can possibly do to help make this year one continuous success for all of us.

MRS. JAMES BLAKE,
National President.

Colorado State Medical Society Officers, 1932-1933

President: Frank B. Stephenson, Denver.

President-elect: Gerald B. Webb, Colorado Springs.

Vice Presidents: First, Walter W. King, Denver; Second, Lawrence L. Hick, Delta; Third, B. Franklin Blotz, Rocky Ford; Fourth, William P. Gasser, Loveland.

Constitutional Secretary: Lorenz W. Frank, Denver.

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EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

She Gave Birth to a Mosquito

ON JULY 26, 1933, Mrs. B., aged 39, came into my office complaining that she had a growth on the edge of the upper lid of the right eye which interfered with her vision. Examination revealed a small dark growth on the edge of the upper right lid about the center of the lid margin. Never before had we seen a similar growth. It was about the size of a grain of wheat and was covered by a layer of thin skin.

The next day on opening the covering there appeared a watery white secretion accompanied by a small dark object. There was no blood in the discharge. A little trichloroacetic acid was applied to the walls of the cavity and no dressing used.

On examining the black object which was removed, it appeared to be a small mosquito, with partly developed wings. The head, legs, and proboscis under a magnifying glass were plain. The insect was sent to the Public Health Service at Washington, D. C., and classified by the Division of Zoology as "a dipterous insect." "A more definite determination could not be made because the specimen was badly crushed." The word dipterous means two-winged; all who saw the insect before it was sent away agreed it was a small mosquito.

Doubtless a mosquito egg was deposited on the edge of the eyelid in one of the hair follicles or meibomian glands and being supplied with moisture and heat developed under the skin. The lady in question had not been out of Wyoming and lived near the Little Goose Creek where mosquitoes are abundant.

E. W.

REGULATIONS PASSED BY STATE BOARD OF HEALTH GOVERNING THE CONDUCT OF TOURIST CAMP GROUNDS

With the rapid improvement of highways within the state of Wyoming and throughout the nation, the volume of tourist travel by automobile has increased tremendously in the past few years. The many scenic attractions of Wyoming not only draw tourists from other parts of the Union, but also stimulate an interest in travel among our own citizens. The establishment of tourist camp grounds and camp sites in many communities of the state has been a great factor in bringing business to these communities and has to a large extent done away with promiscuous camping along the highways.

This interstate and intrastate travel is highly desirable and very important in the development of the state and the nation. It brings with it, however, added responsibilities to the communities involved and to the state administration.

Rules and Regulations Governing Sanitation of

Tourist Camps and Camp Sites

Adopted by the State Board of Health

Rule 1

APPLICATION

The following regulations shall apply to any city, county, city and county, village, community, institution, person, firm or corporation operating, maintaining or offering for public use within the State of Wyoming any tract of land regularly established for camping or having tents or cabins for use either free of charge or by payment of a fee.

Rule 2

LOCATION

These camps shall be located upon dry, well drained ground and any sink holes or pools of water shall be drained and filled when the grounds are first established and shall be kept drained during the period of use.

Rule 3

WATER SUPPLY

(a) A water supply approved by the State Board of Health shall be provided and shall be of ample quantity.

(b) Such water supply shall be easily obtainable from its source or from faucets on a pipe distribution system. Any other water supply which may be available but which is not of good sanitary quality, shall be eliminated, purified or so posted as to warn the people that it is not to be used for domestic use.

Rule 4

SEWAGE AND GARBAGE DISPOSAL

(a) Fly-tight privies or water-flush toilets shall be provided and shall be maintained in a clean and sanitary condition.

(b) Separate toilets shall be provided for men and women, one for each fifty (50) persons or fraction thereof.

(c) These toilets shall be established within reasonable distances of all parts of the grounds and plainly indicated by signs.

(d) Supervision and equipment sufficient to prevent littering of the grounds with rubbish, garbage or other refuse shall be provided.

(e) Earth pit privies shall not be located less than 100 feet from any mountain stream, lake or dry gulch, 200 feet from any well, or 300 feet from any spring. Water-tight, concrete vault privies shall not be located less than 15 feet from any such watercourse. There should be no possibility of surface run-off entering privy vaults. Removable pail type privies should not be located in the mountains, since, through careless emptying of the pails, contamination of streams and other watercourses would be likely to result. No privy should be located less than 50 feet from a residence, and this distance should be more if possible to guard against the infection of food by flies.

(f) Some efficient sterilizing compound should be placed in privy vaults and pails at regular and frequent intervals, such as chloride of lime, unslaked lime, cresol, etc. In the case of pail type privies, the pail contents should be treated with some such sterilizing compound before emptying, and the contents should be buried under a foot of earth at the distances from watercourses specified herein for earth pit privies. When the contents of concrete vault or earth pit privies are removed, they should be similarly treated and buried, and under no conditions deposited in a watercourse or on the surface of the ground.

(g) Fly-tight depositories for such materials shall be provided and located within a reasonable and easily accessible distance from all parts of the grounds. Location of these depositories shall be marked by conspicuous signs.

(h) These depositories shall not be permitted to become foul-smelling, unsightly, or breeding places for flies.

(i) The method of final sewage and refuse disposal utilized in connection with the operation of such grounds shall be such as to prevent the creation of a nuisance.

(j) If water under pressure is available, flush toilets must be installed and connected either to the general sewage system or to a septic tank or cess pool.

(k) No sewage disposal system shall be so located as to endanger the purity of any water supply used for culinary or drinking purposes. The use of abandoned wells for cess pools is expressly prohibited.

Rule 5

HOUSES

(a) Any cooking or shelter house for common use which may be maintained on the grounds shall be kept in a clean and sanitary condition at all times.

(b) Private cabins shall be constructed in such a manner as to be easily cleaned and kept in good sanitary condition.

(c) Water and other refuse shall be disposed of in such a manner as not to create a nuisance or contaminate the drinking water supply.

(d) Cabins, tents and other structures shall be thoroughly cleaned after occupation.

(e) If mattresses are provided, washable cover slips shall be used and kept in a clean and sanitary condition.

Rule 6

CARETAKER

At least one caretaker shall be employed by the management to visit licensed grounds regularly during the season or period of use, and such caretaker shall do whatever is necessary to keep said grounds and equipment in a clean and sanitary condition.

Rule 7

RESPONSIBILITY

(a) The management of every regularly established tourist camping ground shall assume full responsibility for maintaining in good repair and condition all sanitary appliances on said grounds, and shall promptly bring such action as is necessary to prosecute or eject from said grounds any person or persons who wilfully or maliciously damage such appliances, or any person or persons who fail to comply with these regulations.

(b) Each and every owner or lessee or management of any grounds established as above stated shall be held responsible for full compliance with these regulations.

(c) Failure on the part of the management to comply with the foregoing regulations shall be deemed sufficient cause for revoking license or declaring premises a public nuisance under the provisions of the law.

(d) These regulations shall be kept posted by the management in conspicuous places on every regularly established tourist camping ground.

The object of these regulations is to protect the health of visitors to Wyoming. Cooperation between the management of camps and tourists in observing and complying with the provisions of these regulations, will add to the pleasure of travel.

OTHER CONVENIENCES

We feel the following are desirable comforts and not luxuries that every community should endeavor to offer to the traveling public:

SHOWER BATHS: Bath houses with concrete floors, containing shower baths are greatly appreciated by the dusty tourist and add to the attractiveness of the camp. Hot water is not necessary.

LAUNDRY FACILITIES: Many camps provide laundry tubs and hot water. This may be considered a luxury, but by providing in an isolated spot, a wash bench, tap and pump with drain for the wash water, promiscuous washing and befouling the grounds with soapy water will be prevented.

COOKING FACILITIES: Many camps provide a screened cook house with gas or electric plates operated on the nickel in the slot plan. A large number of campers have their own gasoline stoves, but the promiscuous use of wood fires throughout the camp grounds should be discouraged. This can be accomplished by providing a sufficient number of fire places throughout the camp. Iron rods set in concrete or stone side walls 12 inches high and 24 inches long, provided with heavy sheet metal covers make ideal fire places for cooking. Fire wood may be hauled in daily by the scavenger wagon.

TABLES AND BENCHES: Rough tables and benches might be considered luxuries, but are greatly appreciated by campers, especially if

housed in a screened house which can also serve as a rest room. Constructed in connection with the registration and information booth and the comfort station, this does not add materially to the expense.

The purpose of these rules and regulations is to protect the health and comfort of the traveling public as well as that of the communities through which the tourists pass. The great need for this is not generally appreciated by those officials charged with the welfare of the community.

When a case of communicable disease breaks out in your community the physician and the health officer immediately see that all necessary sanitary precautions are taken to prevent the spread of the disease and at least the neighboring families know of its existence and thus can protect themselves. In the case of the tourist, however, through lack of proper sanitary facilities, he may, in the early stages of the disease, infect several communities, or as a convalescent or a carrier, he may spread a disease even more widely.

As a guest of the community, the tourist, in turn, should have his health protected by being furnished a suitable, healthful camp site, pure water, and the essential sanitary facilities. The Tourist Camp Ground may be an asset or a liability to a community. Aside from the question of health, civic pride and a sense of common decency should stimulate a community to establish a camp ground, such that the tourist will look forward to stopping there on his return and will pass the word of commendation on to fellow tourists.

THE SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGERY

The following resolution condemning sensational presentations of plastic surgery by irresponsible and non-representative individuals and groups was adopted by the Society of Plastic and Reconstructive Surgery at its stated meeting at the N. Y. Academy of Medicine on May 26:

"Whereas, Sensational stories frequently appear in lay publications concerning the cosmetic repair of the face and body with special reference to the correction of nasal malformations and the eradication of the stigma of age; and

"Whereas, These stories convey the erroneous impression that plastic surgery is purely for cosmetic purposes and involves procedures that may safely be performed by lay cosmeticians in an environment that does not provide the strict asepsis and other safeguards of a hospital operating room; and

"Whereas, These stories are designed to appeal to, and promote the exploitation of, unstable and often psychopathic individuals who have no genuine deformity but are overly sensitive to negligible imperfections and the changes wrought by age; therefore, be it

"Resolved, That the Society of Plastic and Reconstructive Surgery take steps to inform the public

"(1) That plastic surgery is a regular surgical specialty, embracing the reconstruction of defects and malformations that interfere with normal function as well as the repair of gross cosmetic deformities;

"(2) That those engaged in the practice of plastic and reconstructive surgery require the same scientific and technical training as the practitioners of any other surgical specialty and are

bound by the same ethics, adopted in the interests of the public, that govern all reputable physicians, and

"(3) That the safe performance of even minor plastic and reconstructive procedures demands the precautions and safeguards of a first grade operating room, and be it further

"Resolved, That this Society condemn the performance of any plastic operation whatsoever by lay cosmeticians and the use of beauty shops, hotel suites and convention halls for this purpose, and be it further

"Resolved, That this Society warn the public of the dangers of any surgery at unqualified hands and the unreliability of sensation, self-aggrandizing publicity, and be it further

"Resolved, That this Society urge the community to recognize the social aspects of plastic and reconstructive surgery and make it available, at competent hands, to the poor as well as the rich in cases where cosmetic or functional repair is genuinely indicated."

1125 Park Avenue, N. Y. C.

Removal of Plaster Casts

A simple device for the removal of plaster casts has been made by W. K. Kearsley of the research laboratory of the General Electric Company at Schenectady, to whom a doctor explained the difficulties to be encountered when it would be time to remove a cast from his wife, who had been injured in an automobile accident.

The doctor had told Mr. Kearsley that it was often necessary to soften casts with vinegar and then to use heavy cutting pliers or saws. This was not exactly reassuring.

When the broken bone had been temporarily set and was ready for the cast Mr. Kearsley asked that, between the inner cotton bandages and the layers of cloth impregnated with plaster of Paris, there be inserted three lengths of braided steel cable of small diameter, one extending the full length of the back of the cast and the other two along the front from either end of the cast to the opening at the knee joint. The cables were placed, and the cast left for the several weeks required for the mending of the broken bone.

When it was time to remove the cast, the free ends of each cable were attached to a small device Mr. Kearsley had constructed in the meantime. A few turns of a roller atop a runway, and the cable cut through the cast. The patient saw no application of brute strength to heavily-jawed snippers, felt no pinching of cutters, nor even pressure as the cast was sectioned.—News Bureau, G. E. Company.

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EDITORIAL NOTES AND COMMENT

Does the N. R. A. Concern the Physician?

THE principle of operation in the Recovery Act was laid down by the majority in the Seventy-second Congress which gave the President powers necessary in such a crisis. This nation stood at the low point in its history, bowed without a leader, on last March 4—all banks closed; millions of blameless folk in the bread lines. Had we a government or not? If so, its credit had to be re-established. We had banks, but they were shut down. The people's faith in them must be restored. The homeless and hungry had to be protected and a general feeling of security inculcated throughout the land. The new administration faced the task of instilling confidence in the availability of work for men and women who want work—jobs, not words. Success depends upon a balanced allocation of enterprise, with a decent living standard for those who will do their part. The Executive is empowered to act decisively and to alter his course at will and not according to precedent. This crisis, if ever, justifies an experimental attitude. We have placed this magnanimous confidence in an Executive in whom we have faith.

In the interest of cooperation and assurance of the success of this venture, many physicians have asked what their part may

be in the N. R. A. The question naturally entails the physician's hours of work and the hours and salaries of his employees. Professional men, so far, must be exempt from such stipulations. So also are their professional employees. Physicians necessarily cannot have definite working hours; the patients' rights supersede all codes of regulations. However, if a physician employs more than two persons of the non-professional type, as clerks or accountants, they should be under the National Recovery Act with minimum wages and maximum working hours.

Hospitals, because of their large number of employees, are definitely concerned by the Act. Officials in Washington have informed officers of the American Hospital Association that nurses, administrators, dietitians, technicians, and other professional employees do not come within the scope of the N. R. A. Nevertheless, workers of the wage earner element are definitely classified therein. This group will comprise the maids, orderlies, laundry workers, et cetera.

The American Medical Association, as the employer of some five hundred people, has been ordered by its Board of Trustees to enter promptly into the terms of the Act. The Journal A. M. A. and Colorado Medicine among the other state journals, urges all physicians to enter into the spirit of the activity and be, to the greatest extent, enthusiastic advocates of the vital experiment.

Sixty-Third Annual Session— Colorado Springs

THIS number of Colorado Medicine represents our last opportunity to urge members of the Colorado State Medical Society to attend the Sixty-Third Annual Session in September. We also anticipate with pleasure the attendance of many colleagues from Wyoming—our neighbors having no meeting of their own this year.

The program was published in our August issue and will also be placed in pamphlet form with each member before the meeting. Note a well-balanced selection of papers and choice of spokesmen. Dr. Olin West, Secretary and General Manager of the American Medical Association, will be the banquet speaker. All who have previously enjoyed his splendid oratory would travel far to hear him.

There will be no evening meeting of the House of Delegates preceding the official opening of the session. Thus the meeting will be complete in three days, unlike the three and one-half of former years.

Colorado Springs meetings, due to the central location and many attractive features of the city, are always well attended. This year the hotel rates are more attractive than ever before; make your reservations now. If September really represents the beginning realization of a new deal, let's rejoice together—or supposing we rejoice anyway—in Colorado Springs, September 14 to 16 inclusive!



Biological Factors in Epilepsy

NORTHWEST Medicine has recently published a paper describing the successful treatment of epilepsy with calcium. The work followed upon similar therapy successful in a series of migraine cases. The findings would further verify the presumed relationship between the conditions.

The migraine patients were given calcium gluconate orally on an empty stomach. When the fasting blood serum calcium reached 11 mg. per 100 c.c., attacks ceased and did not recur while that level was maintained.

Likewise, ten epileptics were found to have serum calciums below normal in all but two cases. The latter were within normal limits—12.2 and 13 mg. per 100 c.c.; the other eight ranged from 7.9 to 9.4 mg. The eight patients were given 30 to 60 grains of calcium gluconate orally each day. During two months of observation, no serum calcium rose above 10 mg., but epileptic seizures diminished in frequency and severity. Due to the inability of these individuals thus to raise the calcium to normal, their powers were augmented by vitamin D. They were given one to three drams of cod liver oil daily. Within ten days the fasting serum calcium rose to an average of 12 mg. per 100 c.c. in each case. The epileptic seizures ceased.

We note that the migraine cases responded with greater ease, not requiring the additional vitamin D to raise the serum calcium, and maintaining a normal level from two to twelve months following cessation of the calcium administration. The low-calcium epileptic is either unable to absorb the needed calcium, or it is excreted too rapidly.

The power of calcium to lessen cell permeability apparently prevents certain transudation phenomena in the cerebral motor area. The latter would seem to account for at least a substantial portion of epileptic manifestations.

In the two cases showing normal blood calcium at the beginning of this study, further blood chemistry was performed. Hypoglycemia of 55 and 61 mg. were demonstrated. High carbohydrate diets caused symptomatic relief in both cases.

It is at least interesting that we may through such procedures classify epileptics into two etiological categories—one group with hypocalcemia, another with hypoglycemia.



Is Poverty a Hardship?

A SECTION of the slum population in an English city was moved to a new area and housed in new buildings under strictly sanitary circumstances. A five year study revealed the startling fact that morbidity and mortality were greater than among those re-

maining in the slums. Health officers concluded that higher rents in the new section caused the inhabitants to deny themselves sufficient food. Deduction seemed to demonstrate that malnutrition breaks down resistance more seriously than filth.

The editor of one of the leading state journals, in commenting upon the observation, concludes that America is undoubtedly immune from dire consequences in the event of such an experiment on this side of the Atlantic. American people let the landlord do the fasting and worrying.

We might add that those higher rents might have caused the conscientious foreigners to deny themselves prompt and adequate medical care. Poor Americans would simply crank up their cars and head for the free clinic.



Economies of Group Practice

AMONG the numerous achievements in "group practice-group payment" plans, given publicity by the late Committee on the Costs of Medical Care, was that of a Los Angeles Clinic which gave some half million dollars' worth of service for \$216,500 during 1931. The Ross-Loos Medical Group is owned by two physicians and has made agreements with fourteen associations of employees to supply practically complete service for \$2.00 a month per employee. The services comprise home, office, and hospital care (not exceeding three months during any year), x-ray and laboratory work, physical therapy and all needed drugs and dressings. Ambulance transportation is allowed when required. The subscriber's dependents are eligible to the same, except for moderate charges for hospitalization and drugs.

During 1931, the clinic had 6,747 eligible subscribers and 11,823 dependents. The total cost of supplying the service was \$201,310. Analysis reveals that these people received more care at far less cost than in similar economic groups served by private physicians.

Impartial observation of its work has re-

vealed that the group is expeditiously giving service comparable with the best available to the better class of pay patients. Their nineteen physicians are apparently satisfied; their net incomes ranged, in 1931, from \$3,300 to \$4,600 (exclusive of the owners)—average, \$3,900. Their incomes have risen during the depression, while those of private practitioners have declined. It has been recommended that the monthly fee of the subscribers be raised from \$2.00 to \$3.25 or \$3.75, so as to eliminate any special charges to dependents and to allow the physicians larger incomes and more leisure. Further possibilities include reserve funds for epidemics and expansion; later, home nursing and dentistry might be included.

The principal groups now subscribing are firemen, policemen, water department and telephone employees, and teachers. Payroll deductions are authorized in most instances; there are no bad debts. General salary reductions resulted in increased rather than decreased subscriptions. It is generally agreed that a satisfactory personal relationship and confidence exists between patients and physicians.

We note that this organization embodies recommendations of the majority report of the Committee. Contrary to the predictions of the minority, it has obviously achieved a remarkable success and promises to expand. Since the dissolution of the Committee, comparatively little has been heard of medical costs. The majority of physicians hold in their minds that from a colossal waste of time and money was deduced a non-workable conclusion contrary to all traditional ideals and ethics.

Dr. Ray Lyman Wilbur deprecates our profession's seeming complacency, insisting that it is foolhardy and dangerous. In view of the progressive modifications in medical service, he claims, further changes are inevitable and will be wrought either by or in spite of the profession. In view of this, we will occasionally mention the mechanism, success, or failure of such a plan as this in Los Angeles. Our readers need not become unmindful of the trends in the economics of medicine.

THE OBLITERATING APPENDIX AS A CAUSE OF DISTURBANCES CONNECTED WITH ABDOMINAL NERVES AND LYMPHATICS*

LEONARD FREEMAN, M.D.
DENVER

When an operation is done for chronic appendicitis, the surgeon may be disappointed in finding an "obliterated" organ only—a mere fibrous string perhaps, seemingly inadequate to explain the symptoms. In fact it often is regarded as harmless, some surgeons even disdaining to remove it. But is it harmless? Much has been written on both sides of the question, but the evidence seems to be accumulating that a partially or completely obliterated appendix may be the source of considerable trouble.

What is this obliterative process? Ribbert¹, whose ideas have been widely accepted, considers it to be a natural involution, beginning at the tip and slowly progressing toward the base of the organ, gradually converting it into a fibrous cord from which the lumen and its mucosa have disappeared. Others² have regarded chronic inflammation as the cause, while some³ take an intermediate stand, viewing it as sometimes due to involution and sometimes to inflammation.

The question perhaps is of greater academic than clinical significance, because whichever explanation is favored the fact remains that an inflammatory zone usually is found just in front of the advancing obliteration, sometimes amounting to a subacute or even an acute condition. This inflammatory zone can exist without remission for a long time while obliteration is going on, thus constituting a true chronic appendicitis in contradistinction to the interval form. Horsley⁷ found an inflammatory zone in 58.7 per cent of 273 cases of obliterative appendicitis and argues convincingly that it probably existed in all of them at some period of the process. I have found it in so many of my cases that I am surprised when it is not more or less in evidence. The underlying

cause of the phenomenon, however, is not clear and requires further study.

An obliterating or obliterated appendix might produce trouble in several ways: (1) by vascular absorption; (2) from irritation of vegetative nerve fibers; or (3) through the post-peritoneal lymphatic system. Let us consider these various ways:

Vascular absorption needs no discussion, being present in most inflammatory conditions; but it hardly can play an important part in the comparatively mild form of inflammation usually met with in obliterating appendicitis, although it may do so occasionally where the inflammatory zone is very pronounced.

The irritation of nerves, however, is not so well recognized. The appendix is unusually well supplied with fibers from the vegetative nervous system, which are distributed between the muscularis and the mucosa. During the obliterative process, in which the mucosa is destroyed and the muscularis replaced with contracting fibrous tissue, these nerves at first undergo hypergenesis and later compression, resulting in the formation of constrictions and numerous sensitive neuromata. The nerve irritation produced in this way causes what Masson³ appropriately terms *appendicite neurogene*, because of its effect upon the nervous system.

From such an obliterated appendix pathologic nerve impulses are carried to the solar plexus (Vorschütz⁴) from where they are distributed to various abdominal organs, resulting in muscular disturbances of the gastrointestinal tract (pylorospasm, constipation, diarrhea, etc.) with alterations of various secretions and hormones, gastric hyperacidity being an especially noticeable occurrence, perhaps accompanied by ulceration of the duodenum or stomach. Even the pupil of the right eye is often affected, causing it to become smaller than its fellow, a feature emphasized in diagnosis by Buchmann, Sawitzkiz⁵ and others. When the

*From the Surgical Department of the University of Colorado Medical School and Hospitals. Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 10, 1932.



Fig. 1. Beginning obliteration, with inflammatory zone at "a."

irritation is great, or the nervous system unusually susceptible, the disturbance may spill over into the cerebrospinal system through the spinal ganglia, resulting in spasticity of the abdominal wall and other nervous and neurotic manifestations so often observed in the symptomatology of obliterating appendicitis.

These phenomena may perhaps be compared with those seen in connection with abdominal scars and amputation stumps, where contracting fibrous tissue causes irritation of nerves and the formation of sensitive neuromata, followed by more or less general nervous reactions.

Lymphatic absorption has been emphasized recently, especially by Pribram⁶. He calls attention to the importance and wide spreading ramifications of the retroperitoneal lymphatic system and to its interconnections with the various abdominal organs. A chronic infection of this lymphatic network can give rise to a great variety of more or less obscure symptoms, the ports of entry being principally the appendix and the gall bladder. He insists, however, that



Fig. 2. Progressing obliteration, inflammatory zone at "a."

it is not acute but chronic inflammations that cause the most trouble. Acute inflammations rapidly close the lymphatics, while the chronic ones permit of long continued absorption, hence the more chronic the disturbance the greater the danger. Among other interesting conclusions he shows quite clearly how pancreatitis, periduodenitis, duodenal and gastric ulcers, etc., may have their origin in these lymphatic infections. The co-existence of such lesions with obliterating appendicitis is a matter of common observation as is also enlargement of the mesenteric lymph nodes. This mesenteric lymphadenitis is generally supposed to be due to absorption from the intestine; but this explanation is inadequate because, among other reasons, the nodes always are larger and more numerous toward the root of the

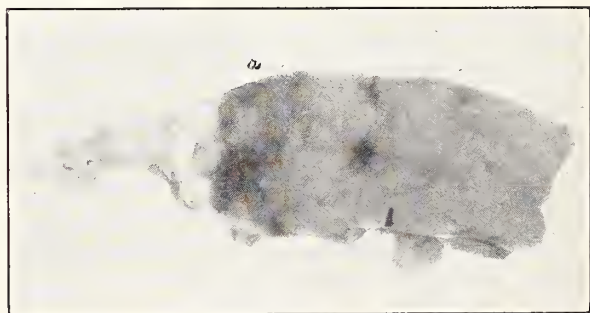


Fig. 3. Completed obliteration of tip of appendix, inflammatory zone at "a."

mesentery rather than near the bowel, and they seldom are found in connection with ulcers and other intestinal lesions and then not widely distributed as in true mesenteric lymphadenitis.

In this connection another point deserves consideration: The whole retroperitoneal lymphatic system with its glands is intimately surrounded by a bewildering maze of vegetative nerve fibers, some of them even penetrating into the nodes themselves. These fibers are subject to irritation when the lymphatics are involved, thus adding to the pathology and symptomatology radiating from a chronically diseased appendix.

In conclusion, it seems obvious that chronically inflamed gall bladders and appendices, especially the obliterative appendix, are not so harmless as is often supposed; hence they should be removed when encountered, in

order to avoid nerve irritation and lymphatic infection. When the latter is once established it may remain long after the cause has disappeared, thus helping to account for the well known postoperative persistence of symptoms, variously reported as from 20 to 60 per cent. It also follows that obliterating appendices should be completely removed, leaving no portion as a subsequent source of trouble.

Summary

1. Obliterating appendicitis, whether it be regarded as an involuntary or an inflammatory process, usually is accompanied by a persistent zone of inflammation preceding the obliteration, thus stamping it as a true chronic appendicitis in contradistinction to the recurrent form.

2. It may be the cause of many more or less obscure symptoms due to retroperitoneal lymphatic involvement, or to irritation of vegetative nerve fibers widely distributed to the various abdominal organs and intimately connected with the cerebrospinal system.

3. When the retroperitoneal lymphatics are once involved, the trouble may continue after the appendix is removed, thus becoming one of the causes of persistence of symptoms after operations.

4. Hence an obliterating appendix should be removed when encountered—the earlier the better.

REFERENCES

- ¹Ribbert: Deut. Med. Woch., Vol. 29, No. 23, 1903, p. 402.
- ²McCarty: J. A. M. A., Aug. 6, 1910, p. 488.
- ³Masson: Ann. D'Anat. Path. Med. Chir., Vol. 1, No. 1, 1924, p. 3.
- ⁴Vorschütz: Zentralbl. Chir., No. 4, 1929, p. 217.
- ⁵Sawitzkiz: Arch. Klin. Chir., B. 168, H. 3 & 4, S. 610.
- ⁶Pribram: Archiv. Klin. Chir., B. 160, 1930, S. 362.
- ⁷Horsley: Ann. Surg., Oct., 1932, p. 515.

ABSTRACT OF DISCUSSION

P. J. McHugh, M.D., Fort Collins: I have listened with a great deal of interest to Dr. Freeman's paper. From my personal observations I am certain the doctor describes a type of appendicitis which is not uncommon. Lymphatic or mesenteric glandular involvement adjacent to the appendix in connection with appendicitis suggests a guarded prognosis after removal of the appendix. The symptoms before and after operation are so similar in many cases as to convey the idea that the glandular involvement is the dominating cause of the original symptoms. The true nature of the disease with its complication cannot, in my opinion, be diagnosed before operation. However, it is essential that appendix be removed as the probable source of infection in the lymph glands.

F. B. Stephenson, M.D., Denver: X-ray findings with regard to the appendix depend on use of the barium meal. Repeated observations may be necessary. Demonstration of a narrow, thready lumen may indicate an atrophic appendix or inflammatory contraction of the lumen.

If the appendix fails to fill over a period of three or four days, the following deductions can be made:

1. It may be retrocecal and hidden by filled cecum (often being seen later when the cecum has emptied).
2. The lumen may be occluded at its mouth by inflammation or by a fecalith.
3. It may be atrophic.

I feel confident that if diligent and repeated search for the appendix is made and it still fails to be visualized by barium meal, we can say that it is involved by one of these three conditions.

The findings in the case of the barium-filled appendix tell another story which has no bearing on Dr. Freeman's paper.

FACTORS AFFECTING MORTALITY IN ACUTE APPENDICITIS*

GEORGE B. PACKARD, M.D.

DENVER

The purpose of this paper is to review briefly all the cases of appendicitis operated upon at the Colorado General Hospital up to 1932. Certain conclusions are suggested which conform more or less with those reported from larger hospital centers covering a longer period of time. We have at the Colorado General Hospital probably a more severe type of case than at most hospitals,

as the majority of these patients come from outside of Denver, often from long distances and often late in an attack.

Death Rate in Appendicitis

The mortality of acute appendicitis as variously reported ranges from 2.5 to 10 per cent, the average running around 5 per cent. The Metropolitan Life Insurance Company¹ reports a death rate from appendicitis in 1911 of 10.9 per 100,000 population, in 1928 of 13.7. The statistician² of the Prudential Insurance Company of America in a study of sixty cities reports that the

*From the Department of Surgery, University of Colorado Medical School and Hospitals. Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 10, 1932.

case records at the Colorado General Hospital with the view of learning, if possible, what factors may have influenced the mortality there. The total number of cases operated on for appendicitis at the hospital up to 1932 was 185. The cases were divided among about fifteen operators. There were eighteen deaths, giving the high rate of 9.7 per cent.

Influence of Age and Sex

Age plays a very important role in prognosis as shown by the accompanying chart (Table 2). The mortality is high in infancy and early childhood, decreases in the 'teens, reaches its lowest point between 20 and 40, and then steadily mounts as age advances.

TABLE 2. MORTALITY ACCORDING TO AGE

Age by Decade	Survived	Died	Per Cent
1-10	18	2	10.0
11-20	67	5	6.9
21-30	44	4	8.3
31-40	18	0	0.0
41-50	13	3	18.7
51-60	4	1	20.0
61-70	1	2	66.6
71-80	0	1	100.0

Females seem to have more resistance to the disease than males. Thirteen of the 18 deaths were in males. The mortality in males was 13.7 per cent, in females 5.5 per cent. The incidence in the two sexes was almost identical—82 in males, 85 in females.

Value of Blood Count

While we usually think of a high white blood count as indicating to a certain extent the severity of the attack, it is hard to draw conclusions from a series such as this. The average white count in the surviving cases was 15,200, the highest 32,000, and the lowest 6,000. The average in the fatal cases was only slightly higher, being 7,300, the highest 27,000, and the lowest 4,000. Eighty-five per cent of the surviving cases and 88 per cent of the fatal cases had a count of 10,000 or over. These averages are too similar to allow us to draw any conclusion as to mortality expectancy from the white count. The white corpuscle count was also tabulated as regards drainage. The average count in the cases not drained was 12,600, in the cases drained 21,000. From

this it does seem that the extent of suppuration decidedly affects the count.

Time Influence

The duration of the attack before operation has been stressed by all writers as the most important factor affecting the mortality. This is shown clearly in the accompanying table (Table 3). In twenty-seven cases operated on within twenty-four hours from the onset of the attack there were no deaths. From then on the mortality steadily rose to reach its highest level between forty-eight and 144 hours and then fell off sharply in the late localized cases. This rise and fall of mortality corresponds to that noted in nearly all series of cases, that is an almost negligible mortality in the first twenty-four hours, a high point between the third and fifth day when the disease is spreading and peritonitis is present, then a decrease as localized cases and abscesses are met.

TABLE 3. MORTALITY ACCORDING TO DURATION OF ATTACK PRECEDING OPERATION

Duration Hours	Lived	Died	Per Cent Mortality
0-24	27	0	0
25-48	39	4	9.3
49-72	22	5	18.5
73-96	8	2	20.0
97-120	12	2	14.3
121-144	7	1	12.5
Over 144*	35	2	5.4

Table 4 was made to show the relation between the duration of the attack before operation and the length of the postoperative stay of the survivals. Except that cases operated on in the first twenty-four hours have the shortest hospital stay, the figures are not particularly conclusive. In a relatively small series such as this, one or two unusually long cases will make a great change in averages.

TABLE 4. AVERAGE HOSPITAL STAY ACCORDING TO DURATION OF ATTACK PRECEDING OPERATION

Hours Before Operation	Days in Hospital After Operation
0-24	13.9
25-48	19.8
49-72	26.1
73-96	24.4
97-120	20.5
121-144	19.8
Over 144	28.9

*Includes cases not forming abscesses and practically well before operation.

Complications

Most complications can be classified as intra-abdominal, incisional, or respiratory. Others may be called accidental complications, as scarlet fever, otitis media, etc. It will be seen that draining or infected wounds are more frequent as the attack advances, that residual abscesses are a property of late cases, that in these late cases it is often preferable to leave the appendix, and that respiratory complications may follow operation at any stage. Table 5 shows briefly the complications in the surviving cases.

value, as so few of the total are known and seldom was the type or strength of the catharsis given.

Cause of Death

The pathology found at operation on the 18 patients who later died showed a justifiable cause for later mortality. In every case the inflammation of the appendix had advanced to the stage of gangrene or perforation, and in every case there was surrounding local or diffuse peritonitis.

This same condition is reflected as the cause of death (Table 6). Of the 18 cases,

TABLE 5. POSTOPERATIVE COMPLICATIONS AS RELATED TO DURATION OF ATTACK BEFORE OPERATION

Hours Before Operation	Total No.	Respiratory	Abdominal Wall	Intra-Abdominal	Others	Pct. of Complications
0-24		2	2	1	0	18.5
27 living	5	1 pneumonia 1 pharyngitis	2 infected Wounds	1 adhesions and intestinal obstruction		
25-48		2	10	2	1	
39 living	15	1 pneumonia 1 empyema	10 draining or infected wounds	1 subphrenic abscess, 1 intest. obstr.	phlebitis	38.4
49-72		2	14	1	0	
22 living	17	1 pleurisy 1 empyema	13 draining or infected, 1 rupt. wd.	1 subphrenic abscess		77.3
73-96		0	5	1	1	
13 living	7		5 draining wounds	1 appendix left in	1 scarlatina	53.8
97-120		1	4	2	1	
12 living	8	1 pneumonia	4 draining or infected wounds	1 fecal fistula, 1 appendix left in	1 rubeola	66.6
121-144		1	2	0	0	
7 living	3	1 pneumonia	2 draining wounds			42.8
Over 144		2	17	9	0	
35 living	28	2 pleurisy	15 drained, 2 infected wounds	3 pelvic abscesses, 6 appendices left in		80.0

Effect of Catharsis

It is greatly to be regretted that this series does not show satisfactorily the effect of preoperative catharsis on mortality or complications. In less than half the histories was mention made whether laxatives had been given before hospital entry or not. Of the 66 surviving cases in which mention was made regarding laxatives, 46 received some such medicine—approximately 70 per cent. Of the 7 fatal cases in which mention of this subject was made, 6 received cathartics—close to 86 per cent. These figures are far from conclusive and of no particular

the cause of death in 14 is given as general peritonitis; in 1, as local peritonitis and intestinal obstruction; in 1 as local peritonitis, subphrenic abscess, empyema and pneumonia; in 1 as liver abscess; and in 1 as pneumonia. This death from pneumonia occurred in a man of 77 with gangrenous appendix and abscess of several days' duration. The pneumonia without doubt can be attributed to the abdominal pathology.

TABLE 6. CAUSES OF DEATH

Original Condition as Found at Operation	
Gangrenous or Perforated Appendix with	
Local or Diffuse Peritonitis.....	18 Cases
Final Condition	
General Peritonitis	14 Cases

Local Peritonitis and Intestinal Obstruction	1
Liver Abscesses	1
Pneumonia	1
Pneumonia, Empyema, and Subphrenic Abscess	1

Discussion

What are the reasons for the steady increase of death rate from appendicitis in the country at large, and what can we learn from the results in this series? Explanations of the present high mortality are variously stated as (1) increasing incidence of the disease without increase in percentage of loss, (2) increasing virulence of the disease, (3) poor surgical technic, (4) preoperative use of laxatives, and (5) operation at the wrong time.

It must be remembered that the death rate per 100,000 is not the case mortality and that the increasing reported rate may be at least partly due to an increasing incidence of the disease. Along the same line, one must consider that, too, there may be an improvement in diagnosis and an increase in the proper listing of deaths. While we have no exact method of estimating the virulence of the disease, it is not generally thought that its virulence is increasing. While the mortality is admittedly too high and possible of downward revision, I believe our rising figures are misleading and that the case mortality is not making any such change. Along this same line of reasoning may be mentioned results from the Boston City Hospital⁶. In 1895, the appendicitis mortality there was 20.7 per cent; in 1922, 3.1 per cent. In 1895, there were 82 cases of appendicitis; in 1922 there were 903. Sixteen patients died in 1895; 27 died in 1922. In spite of the great decrease in case mortality, the actual number dying greatly increased.

Surgical technic without question plays an important role in results. The more the experience of the surgeon, the lower will be his mortality. While the ordinary appendectomy is a simple procedure, certain phases arise from time to time that may tax to the utmost the skill of the most highly trained surgeon. The management of the abnormally situated appendix and the treatment of peritonitis and postoperative ob-

struction make the difference between high and low mortality in the same type of cases.

In spite of all the propaganda to the contrary, it is astonishing to what extent laxatives are used for the early treatment of appendicitis symptoms. While no positive conclusions can be drawn from this series, the figures have been thoroughly worked out in some clinics. Royster⁴, reporting the deaths from appendicitis in eight Philadelphia hospitals, finds that close to 90 per cent of those patients had preoperative catharsis. Such treatment is beyond doubt the best means available to the laity for changing a localized infection to a general peritonitis.

As elsewhere, it is demonstrated in this series that the most important single element affecting success is the length of time before operation. As shown in the statistics quoted from all large hospital centers in the country, the figures here show that operation in the first thirty-six hours is as near safe as any laparotomy can be, that the highest mortality occurs between the third and fifth day, that then another lull takes place to be followed again by a rise in mortality in the late neglected cases. It is in this period between forty-eight and ninety-six hours that the only radical divergence of opinion as to the best method of treatment occurs. In this period the resistance of the patient seems at the lowest ebb, the natural immunity is gone and the acquired is not established. In this period, walling off, which operation may break down, is taking place in the abdomen. For these reasons, many well known surgeons such as Wilkie⁷ of Edinburgh, Collier⁸ of Ann Arbor, Summers⁹ of Omaha, and the late John Deaver¹⁰ prefer to avoid, when possible, operation in this critical period and to use the Ochsner treatment of complete intestinal rest temporarily. Others, and I believe that includes most of the surgeons at the Colorado General Hospital, are so convinced of the value of the earliest possible interference that operation is delayed at no period except when necessary to relieve dehydration or exhaustion. In attempting to tide over this critical period it does seem sometimes that one has let the golden moment pass.

No matter what difference of opinion exists as to delay in that period of high mortality between the third and fifth day, no one questions the absolute indication for immediate operation in the first forty-eight hours. If all the cases could be operated on in this period, the mortality of appendicitis would give little concern. And, too, after the fifth day when abscess has formed or the process subsided, no one questions the advisability of laparotomy though it may not be feasible to remove the appendix.

Conclusions

One hundred eighty-five cases of appendicitis at the Colorado General Hospital have been studied with regard to mortality. There were eighteen deaths.

The duration of the attack before operation is the greatest single factor affecting prognosis.

The number and type of complications varies with the duration of the attack.

The length of hospital stay is affected by the duration of the attack.

The use of laxatives increases the mortality.

In all the fatal cases, peritonitis was already present at time of operation. In fourteen cases out of eighteen, peritonitis was the cause of death.

REFERENCES

- ¹Ryan, Thos. J.: *Ann. Surg.*, 91:714, May, 1930.
- ²Hoffman, F. L.: *The Spectator*, New York, 120: 11, Jan. 5, 1928.
- ³Bower, John O.: *Jour. A. M. A.*, 96:1461, May 2, 1931.
- ⁴Royster, Hubert A.: *Penn. Med. J.*, 34:376, March, 1931.
- ⁵Willis, A. Murat: *Surg., Gyn., & Obst.*, 42:318, March, 1926.
- ⁶Dugan: *Bost. Med. & Surg. Jour.*, 110:102, 1925.
- ⁷Wilkie, D. P. D.: *Brit. Med. Jour.*, 1:253, Feb. 14, 1931.
- ⁸Coller, Fred A. and McRae, Colin C.: *Jour. Mich. State Med. Soc.*, 30:319, May, 1931.
- ⁹Summers, John E.: *Nebr. State Med. Jour.*, 14:52, Feb., 1929.
- ¹⁰Deaver, John: *Surg., Gyn., & Obst.*, 51:529, Oct., 1930.

CYSTIC APPENDIX*

WITH REPORT OF THREE CASES

LANNING E. LIKES, M.D.
LAMAR

In perusing the literature, I found this condition comparatively rare, else there is a failure in reporting cases. Hartman & Kindley¹ have summarized its frequency in the following report: In 1905, Corning² stated that only about 60 cases of cysts of this kind, discovered at operation or at necropsies, had been reported, and that in 7,108 necropsies by various observers there were found only 27 cases (less than 0.4 per cent). At the same time Corning reported four cases from among 735 appendices removed at operation and sent to his laboratory. Since then a number of cases have been reported, particularly in the foreign journals.

Thus, Weinhold³ in 1909 removed a large appendiceal cyst from a woman aged 74, having previously made a diagnosis of pedunculated myoma of the uterus. Wilson⁴ reports a case in which he has made a probable diagnosis of ovarian cyst, and another

which ruptured during bimanual examination. Eden⁵ encountered a case in which there was also a large cyst of the right ovary, which had ruptured. Recently, Hammesfahr⁶ has described somewhat in detail his findings in two operative cases in which the contents of the cyst were pseudomyxomatous in character. Dodge⁷ up to 1916, including one of his own cases, had collected 142 of which 55 were from autopsies, 66 from operations, and the information was not reported in 21.

The development of retention cyst in appendix is extremely slow. There must be obliteration of a portion of the mucous lining and a sterilization of the tract beyond obstruction. Experiments conducted by Phemister⁸, Lewis⁹, and Castle¹⁰ proved that any sudden blocking results in gangrenous appendicitis, even where great caution has been taken to preserve the circulation. Probably the most common cause of the obstruction is a cicatricial contraction in a chronically inflamed or ulcerated appendix. No

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doubt adhesions, acute angulations, and compression play a part. But, in addition to the obstruction, we must have an excessive formation of mucus in a sterile field. Garrow & Keenan¹¹ report a case in which the constriction was caused by a carcinomatous nodule invading all the coats of the appendix.

While the cystic degeneration usually occupies the entire appendix, it may be located in the distal part or near the cecal end or somewhere between. There is not always a



Fig. 1. This picture shows the appendix in its relation to the internal ring.

complete obstruction between the appendiceal and cecal cavities, but the contents of the cyst is thick and tenacious in these cases.

In two of my cases the entire appendix was involved; in one of them it was strangulated in the inguinal canal—the outer three-fourths was cystic and with an acute abscess formation in the portion between the cicatricial contracture and the cecum.

The symptoms and diagnosis are not particularly definite. A history of discomfort is usually referred to the right iliac region. In some cases no symptoms are present; in others, symptoms suggest chronic appendicitis. In one of the cases I am reporting, malignancy of the cecum had been suspected. Hartman & Kindley¹² made a diag-

nosis of probable floating kidney. This patient had previously been operated upon and a kidney fixation performed. F. W. Bailey¹³ makes the statement that there is no record of a preoperative diagnosis having been made.

Prognosis in these cases is good if operated upon before rupture. After rupture, the cystic contents may produce a pseudomucinous peritonei. This condition was first described as a result of a ruptured colloid cystoma of the ovary. Later study showed that it may come from other organs, intestinal diverticula, and gall bladder. The first case arising from a perforated cystic appendix was reported by Frankel¹⁴ in 1901. The prognosis of pseudomucinous peritonei is unfavorable. Most cases are fatal although of long duration.

Phemister¹⁵, one of the investigators of this condition, says: "Perforation occurs usually without any accompanying symptoms, and the pseudomucinous material becomes disseminated over the peritoneal surface in various sized masses; these may be confined to the vicinity of the appendix, but usually they are found in the pelvis and over the peritoneum of the lower part of the abdomen." The peritoneum may be irritated and throw out an investing fibrous sheath by which the particles become attached to it. The colloid material probably never contains living epithelial cells (as when derived from the ovaries) which proliferate and continue their secretions. The opening in the appendix usually persists so that there is a more or less constant escape of material into the abdominal cavity. In a few instances it has been found closed at operation or necropsy. These patients usually have little or no symptoms, as the contents are sterile. Loth recently reported a case in which rupture was accompanied by acute abdominal symptoms, and slight temperature and pain continued irregularly for four months when the appendix was removed. Removal of the cystic appendix results in a cure, as the source of the material is removed and the remaining portion is silently absorbed.

This peculiar complication was illustrated by a case which Roberg operated in 1907,

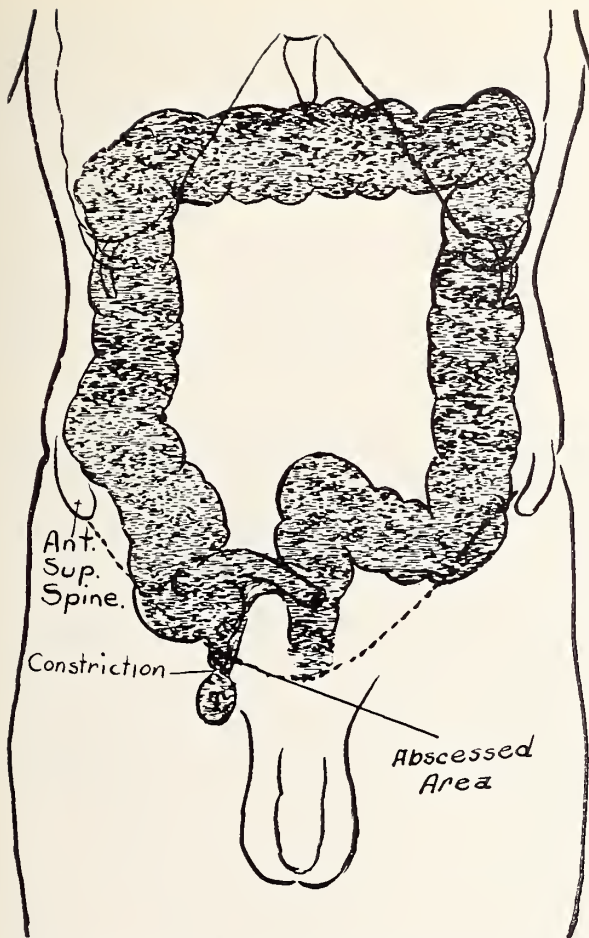


Fig. 2. The above illustration shows the relative position of cystic appendix and the abscessed area in relation to the inguinal canal and surrounding structures.

the specimen of which is in the museum of Rush Medical College. The patient was a woman aged 46. She came for advice because of a left inguinal hernia, the presence of a palpable tumor in the right lower quadrant not having been noted. At operation the peritoneum was studded everywhere with gelatinous masses, large numbers of which were removed from the hernial sac and from the culdesac of Douglas. The cystic appendix, which measured 13 cm. in length, was filled with a pseudomucinous material, and a small perforation existed through which the gelatinous contents escaped into the peritoneal cavity. The condition was at the time thought to be colloid carcinoma of the appendix, but following the operation all symptoms disappeared and one year ago the patient was living and well.

According to Wilson¹⁷ only twelve cases arising in this way are on record, but Trotter¹⁸ suggests that some cases with obscure

symptoms may not be recognized, and that others are regarded as examples or primary colloid carcinoma. Other complications suggested as intestinal obstruction and ileus have been reported by Wegener¹⁹ and Dugs²⁰.

In checking over text books for information on the pathology of cysts of the appendix, I found mention of it in two books. From Stegel and Fox "Textbook of Pathology," page 715: "Cysts may occur in the intestinal area from the remnants of fetal structures such as the blind end of diverticulum, one that has had proximal and distal ends closed leaving a patulous and secreting midpiece. Cysts of epithelial glandular origin are rare but perhaps more common in the lower animals than in man. Obstruction of the intestinal end of the appendix seems to lead to a cyst-like dilatation of this blind organ when the contents are not pathogenic enough to cause acute inflammation. Under these circumstances the organ dilates by the accumulation of material of a pseudomucinous character, the contents giving the mass a superficial resemblance to a colloid cancer. This has been called a mucocele or pseudomucinous cyst. Occasionally these cysts rupture and spread the mucoid material. It has been suggested that they are related to pseudomyxoma peritonei." Men-



Fig. 3. This is an actual photograph of the cystic appendix, removed by Dr. Bagot. The size can be estimated from the ruler which is graduated in inches.

tion was made also in Dew, "Hyatid Disease," 1928, page 406. The title of the paragraph is "Cysts in rarer situations." Cysts have been recorded in the appendix by Trinca in the Medical Journal of Australia, Vol. 1, No. 3, Aug. 5, 1911. For cysts in these rarer situations the reader is referred to Peiper, "Animal Parasites of Man in Modern Clinical Medicine," 1911, pages 531-539.

CASE REPORT NO. 1

Mr. T. D. I am indebted to Dr. Wm. S. Bagot of Denver for the privilege of reporting this case. Unfortunately all of Dr. Bagot's records, including the pathological report, were lost in the fire in the Tabor Opera House Building a number of years ago. I was surgical intern in St. Joseph's Hospital at the time and assisted Dr. Bagot with this operation.

In a letter from Dr. Bagot he states, "You can get a fair idea of the size from a ruler which is photographed with the appendix. The appendix had shrunk some because it had been in the preserving fluid for some days before this photograph was made. I remember in circumference, I was

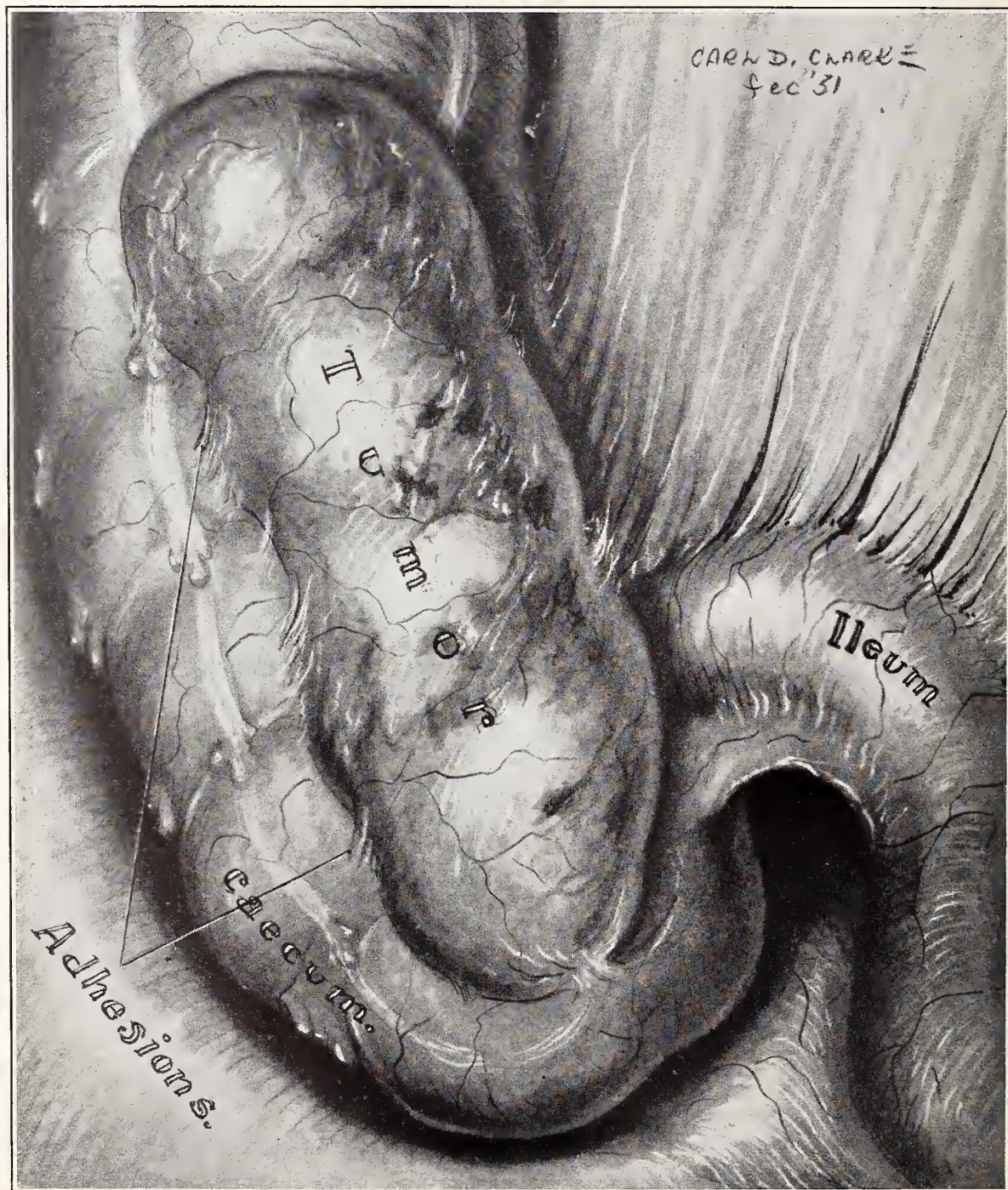


Fig. 4. The above illustration shows the relative position and size of the appendix. It could be easily felt through the abdomen and was mistaken for malignancy of the cecum.

just able to get it through the opening of a quart mason fruit jar and by pushing it down so that it was slightly curved, I was able to screw the top of the jar down tightly." In a later letter when I was attempting to get a detailed report of the symptoms, Dr. Bagot writes, "The patient's symptoms were not very marked; all he complained of were some pain and soreness in the right iliac fossa and dyspepsia, especially flatulence."

Of course, the tumor in the right iliac fossa could be easily felt although the patient had a rather large amount of fat in his abdominal wall. The appendix was turned upward and was adherent to the cecum and first part of the ascending colon so that it felt like a tumor of the cecum, and this was the diagnosis I made before the operation. I thought it was probably malignant. There was very little, if any, tenderness elicited by palpation. Dr. John B. Murphy of Chicago saw the patient shortly after I had made my examination and he made the same diagnosis, probably a malignant tumor of the cecum. The patient made no mention of any previous attack of appendicitis. He made an excellent recovery.

CASE REPORT NO. 2

Mr. John T., patient of Dr. F. E. Casburn, referred June 17, 1928. He was of low mentality, male, single, aged 50.

Physical Examination: Head and chest, negative. Owing to this man's low mentality and the fact that he had a preliminary narcotic, it was difficult to get a satisfactory past history, but his brother informed me that he had always been healthy and fairly active. I found a right inguinal mass which I took to be a strangulated hernia, probably bowel or omentum.

On June 17, 1926, under one per cent novocain with adrenalin anesthetic after a preliminary HMC No. 2 through a low inguinal incision a large mass which was strangulated in the canal was dissected out. It was very difficult to identify this structure, but when completely released it was joined to the cecum. There was a marked constriction, about one and one-half inches from the cecum. Distal to this there was a soft gelatinous swelling about the size of a walnut.

His convalescence was not very satisfactory. The morning after operation he thought he should get up and dress. The nurse found him about half dressed and taking morning exercises. He did fairly well for several days and then his temperature rose to 102; there was some induration and swelling beneath the incision. This was opened and considerable pus drained. He left the hospital in the usual time apparently with a firm scar—however, infection is usually destructive to successful hernioplasty.

Pathological Report: No evidence of malignancy. Appendix was 7 cm. long with marked constriction closing the lumen $2\frac{1}{2}$ cm. from the cecum. Microscopic sections on proximal side of constriction show a chronic appendicitis with a small abscess in lumen. The soft structure, size of an English walnut, was due to a cystic degeneration from the mucous cells in the mucosa of the appendix. This was filled with a soft gelatinous material. Sections through this area show a single layer of epithelium. The muscular coats are particularly displaced by connective tissue. The appendix is surrounded by omentum or soft inflammatory omental structure carried down into the canal by the appendix and makes up the mass of the hernia.

CASE REPORT NO. 3

Mr. W. H. B., seen by me April 1, 1923, for the first time. He complained of a feeling of discomfort in the right side associated with much stomach and bowel disturbance. As I was anxious to have this patient go through the clinic at Rochester, he was referred to that institution April 17, 1923, and I am indebted to Dr. E. Starr Judd for the following report:

"He has had a good deal of difficulty with constipation. His chief complaint was of mild aching in the right side of the abdomen and lumbar region. The x-ray of his colon and urinary tract, urinalysis, cystoscopic examination and blood Wassermann were normal.

"We were of the opinion that constipation might be responsible for his symptoms, and we advised him with regard to treatment. However, we felt that if his difficulty did not subside after a reasonable trial of these measures, the possibility of inflammatory disease in retrocecal appendix should be given further consideration."

I saw this patient again on November 12, 1925, when he was referred to the hospital by Dr. Newland of Springfield, Colorado. He complained of very acute pain in the right side, was nauseated and vomiting. A diagnosis of appendicitis was made and operation performed with the following findings:

Under ether anesthesia, through a right rectus incision, an enlarged cystic appendix was removed. It was about the size and almost the same shape as a large hen's egg. It was white smooth, and glistening with a distinct adhesion to the ileum causing a rather acute angulation. I feel that this partial obstruction was undoubtedly the cause of both the intestinal and gastric symptoms.

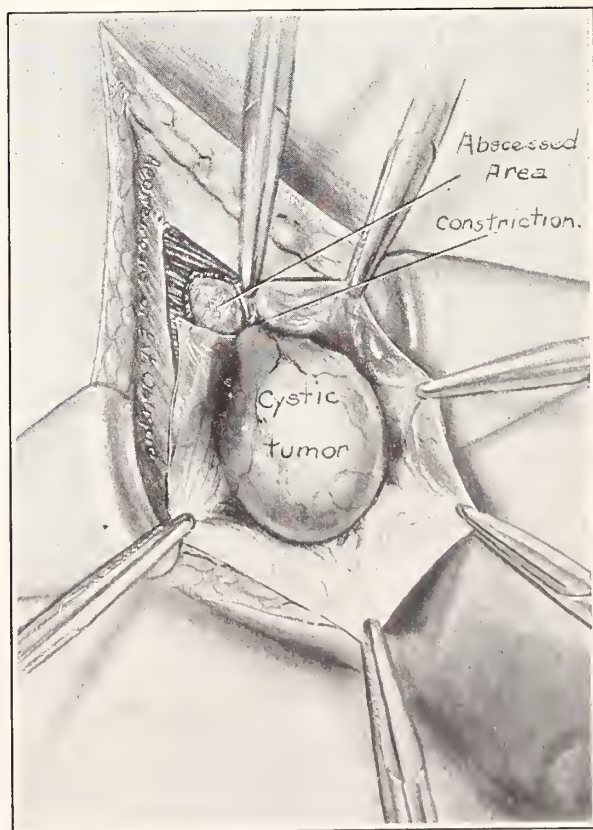


Fig. 5. The above illustration shows the cystic appendix with its marked constriction and the abscessed area in the inguinal canal.

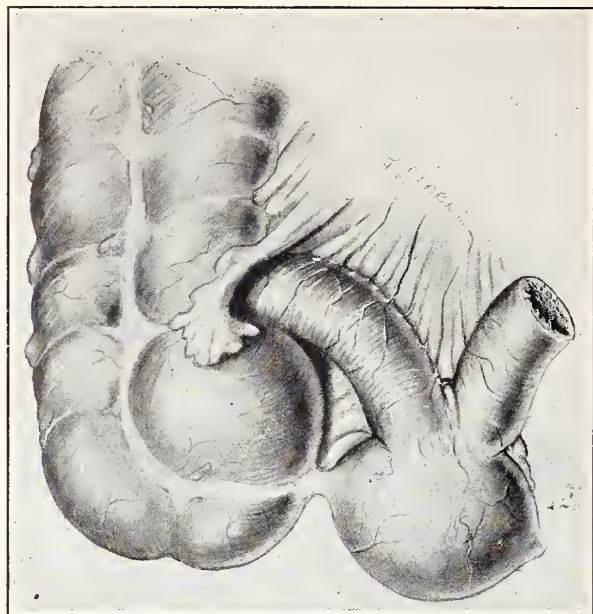


Fig. 6. This drawing illustrates the egg-shaped cystic appendix with a firm adhesion causing a rather acute angulation of the ileum.

This patient's convalescence was normal and he has been free from symptoms since operation.

Pathological Report: The appendix measures 15 cm. by 19 cm. in circumference. It resembles a large size hen's egg in size, shape and appearance. It is filled with a clear soft gelatinous material. Microscopic sections reveal a thin irregular layer of epithelium. The muscular layers have been entirely replaced by a few connective tissue fibers.

In a study of 790 appendices removed at operation, I noted cystic degeneration in two cases.

REFERENCES

- ¹Hartman, H., and Kindley, G. C.: A Case of Pseudomyxomatous Cyst of the Appendix, *J. Am. M. Assn.*, Chicago, 1914, lxii, 1795.
- ²Corning: *Albany Med. Ann.*, 1905, xxvi, No. 12.
- ³Weinhold: *Monstsschr. f. Geburtsh. u. Gynak*, April, 1909.
- ⁴Wilson: *Lancet*, London, 1912, ii, 1496.
- ⁵Eden: *Lancet*, London, 1912, ii, 1498.
- ⁶Hammesfahr: *Deutsch. Med. Wohnschr*, 1913, No. 31, p. 1501.
- ⁷Dodge, G. E.: Cystic Dilatation of Vermiform Appendix. *Ann. Surg.* 48, 560, 1908.
- ⁸Phemister: *J. Am. M. Assn.*, 1915, May, 1929.
- ⁹Lewis, E. C.: *Surg., Gynec. & Obst.*, 1914, xix, 757.
- ¹⁰Castle: *Ann. Surg.*, Phila., May, 1915.
- ¹¹Garrow & Keenen: Primary Carcinoma of Appendix. *Ann. Surg.* 48, 560, 1908.
- ¹²Hartman & Kindley, G. C.: A Case of Pseudomyxomatous Cyst of the Appendix. *J. Am. M. Assn.*, Chicago, 1914, lxii, 1795.
- ¹³Bailey, F. W.: Pseudomyxomatous Cyst of the Appendix and Ruptured Pseudomucinous Ovarian Cyst. *Surg. Gynec. & Obst.*, Chicago, 1916, xxiii, 219-222.
- ¹⁴Fraenkel: *Über das Sogenannte Pseudomyxoma Peritonei*. *Munch. Med. Work.* 24, 965, 1901.
- ¹⁵Phemister: *J. Am. M. Assn.*, 1915, May, 1929.
- ¹⁶Robert, O. T.: *Tr. Chicago Path. Sec.*, 1908, p. 180.
- ¹⁷Wilson: *Lancet*, London, 1912, ii, 1496.
- ¹⁸Trotter: *Brit. Med. Jour.* 1910, i, 687.

¹⁹Wegener: Ileus durch Schleimcysts des Processus Vermiformis, *Centralblatt für Chirurgie*, 1925.

²⁰Dubs, J.: *Car. Bl. C. Schwerz. Aerzte*, 49, 1251, 1919.

ABSTRACT OF DISCUSSION

Leonard Freeman, M.D., Denver: Such a paper dealing with unusual things is of importance. It is not the ordinary things that embarrass us when we encounter them during an operation; it is the unusual things, that we know little or nothing about.

In the operation upon Dr. Bagot's case, at which I assisted, we found a large cyst in the right side of the abdomen and much time was consumed in trying to find out what it was, which we really did not do until we got the thing out—a pity we could not have read Dr. Likes' paper before the operation!

Dr. Packard's paper is also of importance. There should be more papers of this kind analyzing the results achieved in our various institutions. There has been much discussion about the increase in mortality following operation for acute appendicitis both here and abroad, but the reasons are not yet entirely clear. One thing I want to call attention to is this: I think it was Dr. Murphy who laid down the rule that all acute cases of appendicitis should be operated upon as soon as the diagnosis is made. That is true, but with limitations. The disregarding of these limitations I think has led to very many deaths.

When a case presents itself dehydrated, exhausted from vomiting, lack of sleep and food, and perhaps having traveled a long distance, and we follow this rule too exactly and operate at once, the result may be disastrous. If we take a short time to get fluid into the patient, getting the liver and kidneys to acting, letting him get a little rest, perhaps, then the result is more apt to be favorable. There are, of course, cases that require immediate operation, but they must be determined through "surgical judgment," upon which a life must often depend.

O. M. Gilbert, M.D., Boulder: It seems to me the large factor is the time factor. I think that was best illustrated in a recent report from a Birmingham group in which something over 2,000 cases of appendicitis were reviewed and the percentage of deaths at the various stages was very similar to those reported by Dr. Packard. But the very striking thing was that some 400 cases operated in the first six hours included only one death—one-fourth of one per cent.

I am still of the opinion that there is that period from 48 to 104 hours in which we certainly in our own experience have lost more than we have by waiting until things were a bit better localized.

Dr. Freeman will recall a case two years ago which came down to us from Grand Lake. When we saw her she had a very high fever, 104°, and she had had a chill—a thing we seldom see in acute appendicitis. So we were a bit confused in diagnosis. We watched her carefully, making blood counts frequently, and had Dr. Freeman see her in consultation. We all agreed that as it had gone that far, it would be better to wait. We waited, and, while we had an abscess that drained longer, we saved the patient—one that in all probability we'd have lost if we had operated when she was in that acutely toxic condition.

T. R. Knowles, M.D., Colorado Springs: Recently I had a case in a boy of 16, the son of one of our local doctors. He had had a characteristic attack of acute appendicitis with a history of prior attacks from which he had recovered, and on

operation, when I opened the abdomen, I found a very rigidly erect appendix which differed from the ordinary inflammatory appendix we see, in that it was pale and apparently thin-walled, distended, rigid and erect. On opening the appendix, after removal from the abdomen, a constriction was found at the base and the entire lumen of the remainder of the appendix consisted of a cyst. On microscopic examination it was reported as acute appendicitis, but the substance in the appendix was almost wholly mucoid.

M. J. Baskin, M.D., Denver: Time of operation is important, but the factor of drainage or non-drainage is also important. Statistics from England show much lower mortality than in this country. Most English surgeons do not drain as we do here. There, lower mortality probably is due to less frequent drainage.

A number of factors are involved in the etiology of cystic appendicitis. Constriction of the lumen is necessary and also that the distal portion of the appendix remain sterile. Cystic appendix can be produced experimentally. On constricting the lumen, if a small amount of fecal matter is left in the distal portion, abscess results. If large amount of fecal matter is left in, gangrene results. If the lumen is sterile, a cyst results.

O. S. Fowler, M.D., Denver: I have one case that doesn't exactly come under Dr. Likes' classification. It was apparently a combination of cystic formation and an acute inflammation. According to the ordinary view, that is of necessity a true cyst. This man had an appendix that was nine inches long and three-quarters of an inch in diameter. It was gangrenous at the top and when I got first sight of it I thought I had a portion of gangrenous gut. The man made an uneventful recovery.

As to Dr. Packard's paper, he didn't mention a certain phase of anatomical deformity which in my observation has carried a very high mortality, and that is in those appendices that are distinctly high up in the corner of the abdomen. Whether they are retrocolonic or whether the descending colon has failed to descend and to rotate in the fetus I don't know, but I am sure that in my own experience my mortality in those cases has been unduly high.

Of such cases that I can recall, two have died, one of which was ruptured and adjacent to the gall bladder. In fact, we diagnosed a ruptured duodenal ulcer. The man died rather promptly of peritonitis.

Another case, in which a paralytic ileus developed, was a clean operation with the appendix and cecum up in the gall bladder region.

Of a rather odd experience in four cases of undescended cecum, two were in brothers, both adults, and both lived—clean unruptured cases. Two others were in a father and son, operation on whom we did a few weeks apart. We had no idea whether they were congenital tendencies or not. It was a rather interesting experience to have four unusual anomalies so closely related.

Dr. Likes (closing): Regarding what Dr. Baskin said about the etiology, in a very thorough search of text books for information on the cause of cystic degeneration of the appendix, I found mention of it in two books. Stengel said that constriction is essential, and that beyond the constriction we must have a sterile field. However, I found an article that says constriction does not need to be complete if the material is thick and tenacious. In the three cases I have reported, the constriction completely closed the lumen of the appendix.

A DEMONSTRATION OF NORMAL AND PATHOLOGICAL NEPHROPTOSIS*

H. H. WEAR, M.D.
DENVER

Because of the time allotted the various papers presented before the Society, it will be necessary to condense this subject strictly to the accepted definition of nephroptosis, omitting all associated conditions not dependent upon this condition.

"Pathological nephroptosis" is a condition of abnormal renal mobility sufficient to induce pathological conditions within the kidney substance. Consequently, "normal nephroptosis" is applied to that vast number of mobile kidneys, so often described in the medical literature since 1495, as being of common incidence among females, neurotics, and workmen asking for Industrial Compensation. The anatomical explanations of nephroptosis are adequately de-

scribed in texts mentioning the subject, yet the medical profession never has established a method of diagnosis sufficiently accurate to warrant end results satisfactory to our patients.

Recently, urological workers have developed methods by which pyeloureterograms may record the physiological action of the renal calyces, pelvis, and ureter. The most noteworthy of these is the Cinex-Camera of Jarre and Cumming which is so constructed that a pyeloureterogram may be made each tenth of a second for as many as eighty exposures.

The method of serial pyeloureterography that we are using was introduced by Thomas D. Moore of Memphis, Tennessee. He was considerate enough to produce a simple apparatus that is practical and sufficiently inexpensive for general use by urologists.

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 9, 1932.



Fig. 1. Normal left kidney. Ureteral angulation produced with each inspiration.

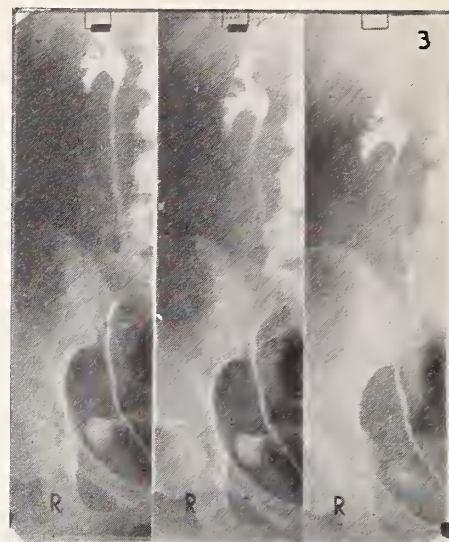


Fig. 3. Normal right kidney.

This equipment may be easily produced to fit any standard x-ray table, or it may be purchased from the x-ray companies. The table we are using permits the patient to be placed in any position from Trendelenburg to the exact upright.

Summary

1. In view of recent advances in serial pyeloureterography, the diagnosis of nephroptosis should ultimately become standardized.

2. Renal ptosis without urinary obstruction has no clinical significance.

3. Urographic study is always a neces-

sity before and after nephropexy, thus proving the presence of pyelectasis before and the absence of pelvic stasis after operation.

4. Serial pyeloureterography should substantiate every diagnosis, that non-pathological kinks and strictures may be excluded as etiological factors.

5. Nephropexy will become more popular with closer cooperative study on the part of the internist and surgeon, thereby recommending only true pathological nephrop-tosis for operative treatment.

The following serial pyelograms were taken in the recumbent position at the end of expiration, the second in the recumbent position at the end of inspiration, and the third taken in the upright position at the

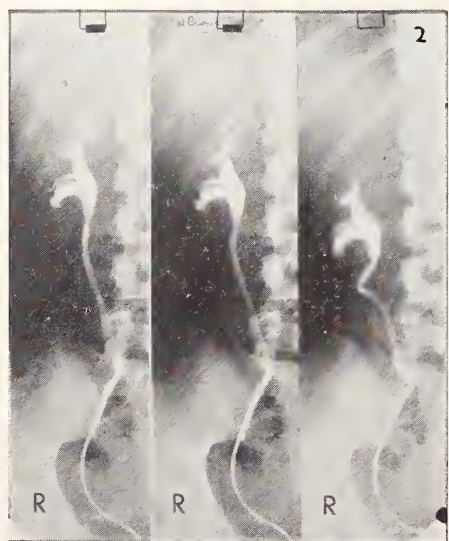


Fig. 2. Normal right kidney. First-degree ptosis in the upright position. History of pyelitis during pregnancy.

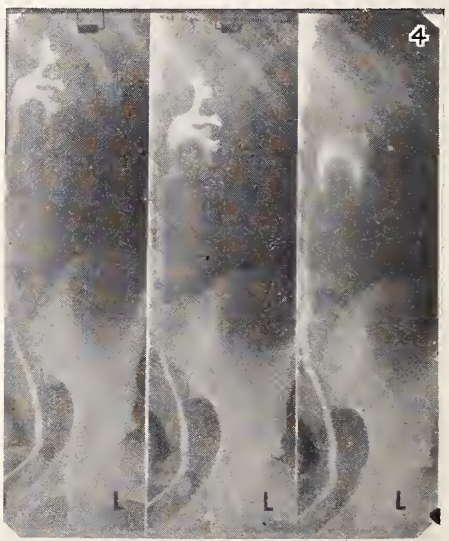


Fig. 4. Normal left kidney. Note ureteral peristalsis.

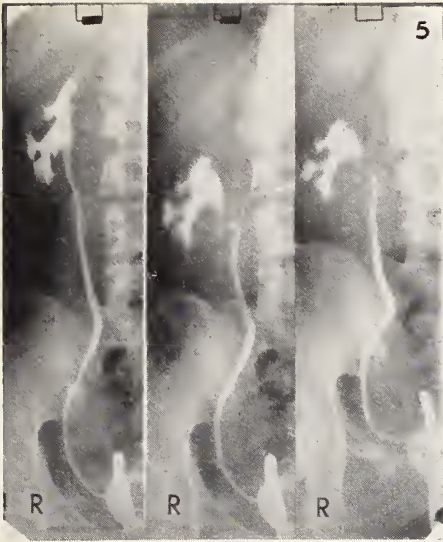


Fig. 5. Right kidney. Patient with general visceroptosis.

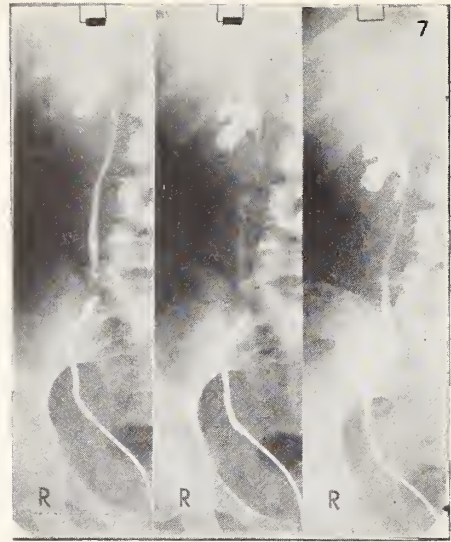


Fig. 7. Normal right kidney. Note the change in position of ureteral kinks during ureteral peristalsis.

end of inspiration, thus producing the maximum ptosis in each instance.

ABSTRACT OF DISCUSSION

John B. Davis, M.D., Denver: The pyelograms Dr. Wear has shown us probably have created in your minds a certain amount of confusion. They do, until we have studied a great many of them and have learned to classify them into certain groups and types. The movement of the kidney with excursion of the diaphragm is not ptosis, yet a kidney may be ptotic and produce no symptoms.

Nephropexy is indicated only when symptoms of obstruction to the free outflow of urine are present. Pain of renal origin can best be proved by urographic study. The size and shape of the renal pelvis and calyces and retention of the radiopaque medium determine this. In the early days of uretero-pyelography, urologists were expected to diagnose these conditions with one cystoscopic examination and a single urogram. Today, we have come to know that often it requires two or more or even a series of pyelographic

studies to make an accurate diagnosis. Repeated urograms on separate plates, or three on one film, as Dr. Wear has shown, suffice.

At a recent meeting of the Urological Association, Dr. Cumming of Detroit, by a moving picture demonstration, showed clearly that apparent kinks and strictures of the ureter, and apparent distortion of the pelvis and calyces are often due to peristaltic contracture of the pelvis and ureter. It is only by the constancy and persistence of these abnormalities that pathology is proved.

O. S. Fowler, M.D., Denver: I should like to agree with everybody who discusses the subject of nephroptosis. There are a number of things in this essay with which I cannot agree. In the first place, we have introduced a term of "normal nephroptosis." Nephroptosis is universally accepted as a non-normal condition, and therefore I regard it as impossible to be regarded as normal in any instance. It may be symptomless, but because it is symptomless doesn't mean it is normal. Because there may be a general vis-

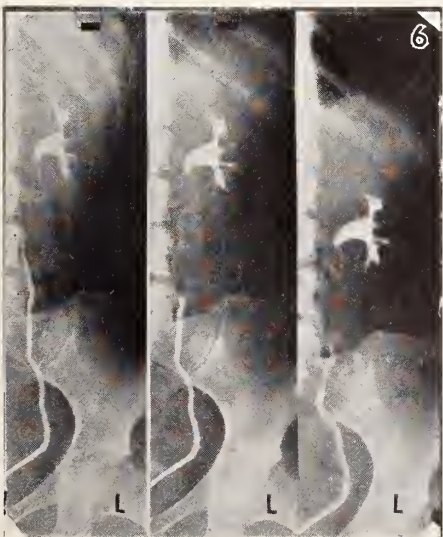


Fig. 6. Normal left kidney. Note ptosis and marked ureteral angulation.

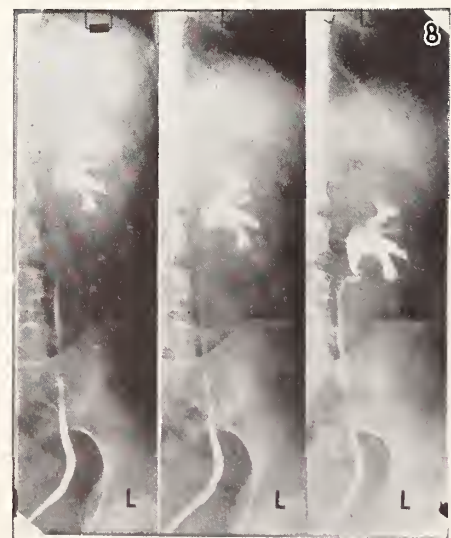


Fig. 8. Left kidney. Slight hydronephrosis with first-degree ptosis. No symptoms after a ten-pound increase in weight.

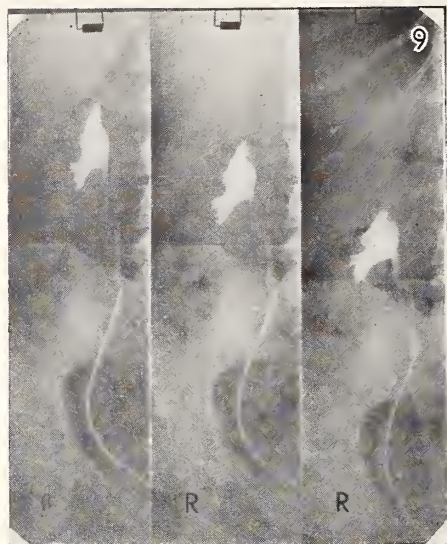


Fig. 9. Right kidney. Ptosis and slight hydronephrosis accompanying general visceroptosis in an older patient.

ceroptosis without particular symptoms doesn't mean it is the normal position of the entire viscera, and it is unfortunate that a meaningless term should be introduced in an accurate subject. If there is a normal excursion of the kidney, and a normal attachment, that normality must be due to the movement of the diaphragm. The perirenal capsule comes up, attaches to the diaphragm about an inch and a quarter, and comes back down in a cavity entirely separate from the rest of the body. In that cavity are the adrenal glands and the kidney. The only normal excursion that the kidney can possibly have is a difference of level of the diaphragm as influenced by respiration, which probably would be to approximately one and a half or two centimeters. Beyond that is beyond the normal.

Dr. Wear also stressed the idea that we must have marked hydronephrosis (if we can call it hydronephrosis) before it can be regarded as a pathological condition. What has happened in the period of time that these calyces and this pelvis went from normal to this condition? Something must have given that distension of the kid-

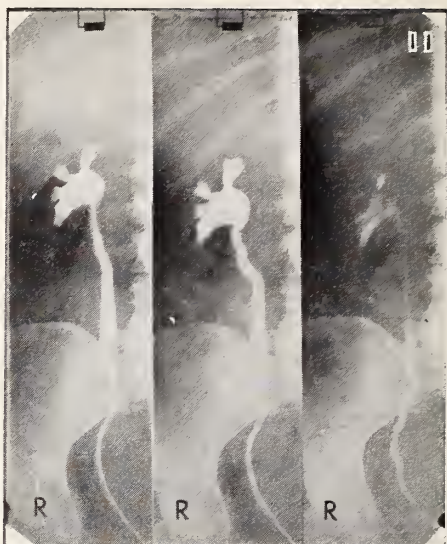


Fig. 11. Hydronephrosis and hydro-ureter. Note rapidity of emptying in spite of pelvic deformity.

ney. I cannot conceive of any necessity of saying that a kidney must have such abnormal conditions before we can diagnose pathology in that tract. We don't expect to have every obstructed bladder up to the umbilicus before we diagnose prostatic obstruction. Prostatic obstruction existed from the time it started from a normal bladder. Therefore, there must have been some pathology that could have been diagnosed from the beginning.

The author cited a case where he felt that because the liver went down, the movement of the kidney was normal. If it went down, did the abdominal aorta go with it? Before we can accept some of his statements, we must disprove the pioneers in this subject as wrong. Edebohl of this country and Delafoy of France stated that no ptosed kidney did normal work, and nobody has ever disproved it to date. The appearance of apparent kinks in the author's pictures is absolutely without meaning, because the pictures are taken on one plate. The fact that all these pictures were taken with the catheter in the ureter, in my opinion eliminates most of their value.

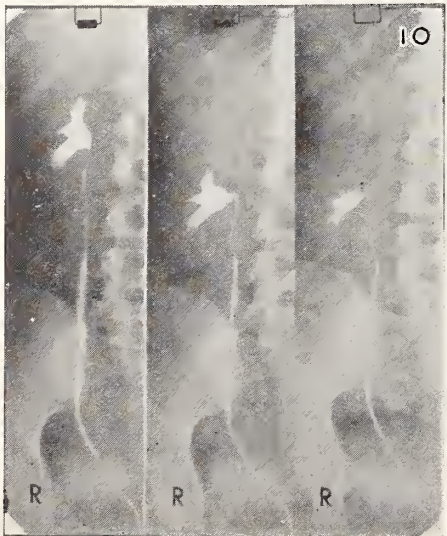


Fig. 10. Right kidney. General visceroptosis.

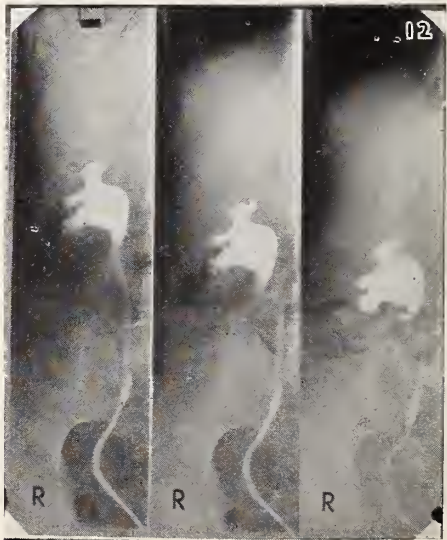


Fig. 12. Right kidney. Hydronephrosis and third-degree ptosis, surgical type.



Fig. 13. Third-degree ptosis with hydronephrosis, surgical type.



Fig. 16. Second-degree ptosis. This type easily supported by abdominal belt.



Fig. 14. Hydronephrosis with persisting obstruction at the ureteral pelvic juncture, surgical type.



Fig. 15. Hydronephrosis with persisting obstruction at the ureteral pelvic juncture, surgical type.



Fig. 17. Right kidney. Third-degree ptosis. This type supported by belt. Case under observation for a period of four years without symptoms during this period.

What we desire in these examinations is to reproduce the normal ureter, and had he shown these kidneys after his catheters were removed, they would have been more valuable. It is not what kidneys do when patients are lying; it is what kidneys do when the patient is upright and when there is no irritating object in the tract to militate against showing the exact condition of that kidney and ureter.

Dr. Wear (Closing): The subject of nephrop-tosis has not been discussed before this society for many years, the main reason being that one of our members has refused to accept the opinion of Urologists on this subject. It has been rather embarrassing for one to submit a paper, knowing that a heated debate would necessarily follow the presentation.

The slides previously shown demonstrated what we consider the normal and abnormal amount of nephroptosis and have attempted to distinguish between the normal or non-surgical nephroptosis and the pathological type requiring surgery for relief. The internists recognize that the type

showing non-surgical nephroptosis will depend upon them for relief or cure.

The important differential point between the types above classified is dependent upon the presence of pyelectasis or renal stasis sufficient to damage the kidney substance. The mobility alone

varies in individuals in the same respect as the mobility of different organs. Certainly those patients suffering from psychoneurosis, inferiority complex, etc., are not to be operated, and such a surgical procedure as nephropexy without pyelectasis or renal stasis will undoubtedly place urological surgery in a deplorable condition.

OBSTETRICS FROM THE STANDPOINT OF THE GENERAL PRACTITIONER*

C. T. KNUCKEY, M.D.

LAMAR

For many years there has been a definite trend of propaganda criticizing the handling of obstetric cases in the United States, unfavorable comparisons of the mortality and morbidity records as compared with foreign countries, and the inference more or less openly displayed, that the physicians of the United States are inferior in this respect to those of foreign countries. Dr. Edwin D. Burkhard in his excellent paper at last year's convention showed how fallacious was the comparison of statistics as they are kept at the present time, and that, if all were kept on the same basis, the United States would compare favorably with any other nation in this respect.

While it is my firm belief that obstetrics is handled as well in the United States as any other branch of medicine, there is room for improvement here as well as elsewhere. The practice of obstetrics perhaps is fraught with more pitfalls for the unwary than that of any other branch of medicine—more on account of the ignorance, carelessness, and neglect on the part of the patient and the unfavorable surroundings under which a large part of the work must be done, than to inefficiency or ineptitude on the part of the attending physician. Nearly one-half of the maternal deaths are due to infection—some exogenous and some endogenous—but most cases of infection can be prevented by proper care.

Much has been written by specialists in regard to the pathology of pregnancy and the handling of difficult cases, some of which is distinctly outside the province of the general practitioner. It is not the purpose of

this paper to enter into this field, but only to deal with what is within reach of all. The majority of obstetrical cases are handled by the general practitioner, who on account of lack of time and often lack of ordinary conveniences in the home has a tendency to become careless in regard to many details that make for efficiency and good work. The aim to be sought is lessened suffering, lowered morbidity and a slight possible decrease in mortality. Perfect restitutio ad integram probably never takes place—traces of pregnancy will always persist, but the woman should be left in as good condition as possible.

The first consideration, and the one probably most neglected is the care of the woman during pregnancy. She must be educated to come for examination at the first suspicion of pregnancy. The physician, if possible, should know the patient thoroughly before labor starts—the condition of heart, lungs, kidneys, liver, and pelvis. Hence this examination should be thorough, including pelvic examination and measurements. Much pathology may be corrected early in pregnancy which might cause serious trouble—such as tonsils, teeth, kidneys, bowels, uterine displacement, cervical infections. Much can be done for the nausea of pregnancy and this can be relieved almost invariably by frequent feeding high in carbohydrate, flushing kidneys, proper bowel action, possibly phenobarbital at night, while specific ovarian extract rarely fails in even obstinate cases. Later dilute hydrochloric acid often works wonders for the gastric distress so common at that time. The diet should be carefully supervised throughout, but especially in the later months, that a proper supply of vitamins and calcium be

*Read before the Sixty-second Annual Session of the Colorado State Medical Society at Estes Park, September 10, 1932.

furnished. Iodides or thyroid extract are often indicated. Vitamin B is reputed to be especially beneficial to prevent dystocia and to insure a vigorous child. For muscular cramps and varicose veins, viosterol is of great help. In the last trimester the abdomen should be occasionally examined and the fetus located. In breech presentations the fetus can often be rotated to a head presentation, if the abdominal wall is not too tense and if sufficient amniotic fluid is present. Also an occiput posterior presentation may often be changed to anterior.

When labor occurs, an early examination and reassurance helps the mother a great deal. Analgesics such as sodium amytal or morphine often work wonders by relaxing the nervous tension and conserving maternal strength. Care should be observed, however, in the use of morphine if delivery is to be expected within two hours, as the new born child is very sensitive to this drug. At this time a careful abdominal examination will usually give all the information necessary. If not, rectal examination may be needed.

Accurate diagnosis of presentation and conditions is necessary, and one should never hesitate to make careful vaginal examination in case of doubt. Contrary to the generally accepted teaching, I have never seen any harm in increase of morbidity or otherwise as a result of a properly conducted vaginal examination. This, of course, means under rigid surgical asepsis. A great deal can be done at this time such as confirmation of diagnosis of presentation and straightening an anterior flexed uterus by bringing the cervix into proper position. The position of the fetus should be visualized. Often gentle dilatation of the cervix will save much hard labor by stimulating pains. Forceps, medium or high, that is, in the superior strait, are usually condemned, but occasionally judgment might advise their use instead of version or caesarian.

There is a sharp distinction between labors in a good hospital or in the home. Perfect asepsis, competent assistance and complete equipment remove much of the drudgery and mental strain. In the average home

it is unsafe to undertake many procedures that would really be beneficial under proper surroundings.

For the past three years the anesthetic of choice in our hospital has been ethylene—preceded in the early stages by sodium amytal in six to nine grain dosage or by morphine. This has been very satisfactory—labors have been much less painful—the patient comes out of the anesthetic promptly with no bad after effects.

As said before, it is not the province of this paper to discuss the management of difficult labor. Unwise interference is never good obstetrics. We should remember, however, that the test of labor is how much Nature can accomplish—not how much the woman can endure. However, anyone practicing obstetrics should be able properly to assist Nature in all but the most extraordinary cases. That is to say, to have patience when that virtue is required, to rotate an occiput posterior, to apply forceps intelligently, to do a podalic version, or to deliver properly a breech presentation. If the fetus is dead, do not hesitate to do a craniotomy if needed to protect the mother. Again let me repeat, accurate diagnosis is the most important factor of all. If a caesarian section is the operation of choice, or necessity, let it be done before the strength of the woman is exhausted and before the cervix has been contaminated and resistance lessened by prolonged labor or unwise vaginal examinations—without these handicaps, the mortality from operation should be low indeed. Caesarian, either the classic or low operation has been a wonderful boon, but there is a great tendency to overdo it. The indications should be definite. Local anesthesia works very nicely here. Again it should be remembered that the fetus is very sensitive to morphine and a preliminary dose of morphine to the mother will result in the loss of some of the babies.

Proper delivery of the head will save a great majority of perineal tears—patience in allowing the parts to soften and relax, sufficient anesthesia to have delivery under complete control, and episiotomy if necessary to prevent extensive laceration of the

floor. Prompt repair of lacerations, if carefully done, will usually give primary union.

After the child is born the responsibility is not lessened. The child should be carefully inspected, including genitals and rectum, the cord dressed, the eyes treated and minute instructions given the nurse in regard to its care. The third stage demands as much consideration for the mother as the first or second stages. The clean delivery of the placenta and proper contraction of the uterus is as important as the proper delivery of the child.

During the puerperium a good regime for

mother and child will do much to start them on the road to health and vigor. The mother should be instructed to report in four to six weeks for examination. Subinvolution, displacements, and cervical lacerations are much more amenable to treatment then than at a later date.

The objective of good obstetrics is to bring babies into the world with the least damage to them from their perilous passage and to leave the mother as nearly normal as possible. A little more time, a little more care and study of the individual case will well repay the physician who practices obstetrics.

UTERINE HEMORRHAGE*

WILLIAM H. HALLEY, M.D. and PHILIP W. WHITELEY, M.D.
DENVER

In reviewing the voluminous literature of uterine hemorrhage, one is led into considerable confusion. In this paper we will discuss the subject from the standpoint of uterine bleeding as a presenting symptom. An approach to the study of abnormal uterine bleeding may be made by considering four groups of causes:

1. Pregnancy—as abortion, molar pregnancy, hydatidiform mole, chorio-epithelioma, ectopic pregnancy, placenta previa, and ablatio placentae.

2. Pelvic inflammation, acute or chronic—due to birth injuries or bacterial infections.

3. New growths—benign or malignant.

4. Functional hemorrhage—due to endocrine disorders or to such constitutional conditions as syphilis, chlorosis, focal infections, tuberculosis, etc.

Any combination of these causes may be present. Displacements may be complicated by pelvic tumors, or pelvic inflammations may be accompanied by endocrine dysfunction. Pregnancy may be present in almost any condition. In endeavoring to arrive at the cause of a given hemorrhage, therefore, the physician may ask, "Is it due to an accident in pregnancy or is it due to

pelvic injury or inflammation? Is it due to tumor growth? Is it due to endocrine dysfunction, or is it due to a combination of these causes? Which, then, is the most important factor?

Massive hemorrhage with the accompanying shock is an emergency which demands not study but prompt treatment as packing, operation, or blood transfusion. We are chiefly concerned with the annoying or debilitating hemorrhages which are chronic in their course.

The history gives much assistance. The patient's age and parity are suggestive of certain causes. Any change from the usual menstrual habit, the duration and character of the bleeding, amount, presence of clots, pain, and intermittency are helpful. So also are relation to the period, previous illnesses or operations, the emotional and economic status of the individual. The history reveals also the patient's conception of the hemorrhage, which may differ from that of the physician.

The pelvic examination is of extreme importance. Inspection, palpation and in the fluid tumors, percussion, are a routine. The source of the bleeding should be determined—whether from the fundus, cervix, or vagina. Recto-vaginal examination should not be omitted. Curettage, diagnostic or cura-

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tive, may give information. In the general examination, consideration should be given to the cardiovascular system, lungs, thyroid, urinary tract, lues and particularly to the blood picture to determine the presence of anemia.

Abortion is among the most frequent causes of uterine hemorrhage for which the physician is consulted. The diagnosis is made upon uterine hemorrhage (usually the first symptom), uterine pain, softening and dilatation of the cervix, and softening and enlargement of the fundus. The history of missed periods may be admitted or denied. It is not essential that the patient give a history of missing a period. The Aschheim-Zondek test is helpful five days after missing a period. It is a peculiar fact that with the prevalence of abortion there is no unanimity of opinion or relatively standardized procedure among physicians as to the treatment. Many resort to the curet immediately and in all cases regardless of the physical condition of the patient. Some curet lightly and some scrape deeply. One pathologist stated that he received "bowlfuls of decidua, endometrium, and muscle." It is extremely probable that abortions took place before there were curets. It is also equally probable that the patients recovered. The treatment of abortion should be shorn of theatricals and hysteria. We have long known that it is unwise to invade or curet a uterus which has already been tampered with and therefore has infected contents. There are two important factors, namely, hemorrhage and infection. Severe hemorrhage may demand interference, but removing membranes from the open cervix and a pack will suffice.

The conservative treatment of abortion is simple and safe. If the membranes are palpable in the open cervix, they should be removed with the ring forcep. Do not invade the uterus until the temperature has been normal for five days. If at any time the cervix be found closed, the fundus firm and bleeding lessened, the abortion has completed itself. Several subsequent menstruations may be increased, but the normal rhythm will return. Curettage is not indicated here. In other words, give the patient

a chance to get well. If on the other hand, membranes remain in the uterus, they may be removed with a ring forcep under anesthesia. If the curet is used, its activities should be limited to decidual tissue. There is nothing to be gained in denuding a soft, potentially infected uterus of its endometrium. Packing is optional. We pack routinely, using iodoform gauze in the uterus and plain gauze in the vagina. These packs are removed in twelve to twenty-four hours. Vaginal examination in two to four weeks to rule out an ectopic gestation is always done.

Missed abortion or molar pregnancy is an infrequent cause of uterine bleeding. It is to be thought of when a patient gives a history of having missed more menstrual periods than the size and development of the pregnant uterus would indicate. The bleeding is not profuse but is constant. The Aschheim-Zondek test is positive unless there is separation of the placental tissue. Observation of such a case is commonly rewarded by the patient passing a leathery-like tissue, after which the bleeding stops. It is here that curettage is both diagnostic and curative. Hysterectomy is not necessary.

Hydatidiform mole causes atypical, irregular bleeding and, in contrast with missed abortion, the uterus is larger than is consistent with normal development of pregnancy. In our cases we have not noted that the patients passed the small grape-like cysts mentioned in the text books. The discharge has been brownish and not profuse unless spontaneous abortion occurred. The complete mole may be passed and bleeding cease. Persistent bleeding, however slight, calls for curettage. The uterus should be carefully and thoroughly emptied. Pathological examination of the mole may not reveal chorio-epithelioma even though it be present in the uterine wall. The Aschheim-Zondek test should be utilized. If this test is strongly positive fifteen days after the hydatid mole is passed or removed, curettage was not complete and molar vesicles are retained, or the presence of chorio-epithelioma is probable. When spontaneous ces-

sation of bleeding and negative Aschheim-Zondek tests follow the expulsion of a mole, further treatment is not indicated. We believe that before the age of 35 years, hysterectomy for hydatidiform mole is too radical a procedure despite the close association of hydatidiform mole and chorio-epithelioma.

Chorio-epithelioma may follow full term labor, abortion, tubal pregnancy, and between 40 and 50 per cent of the cases follow hydatidiform mole. Irregular profuse hemorrhage begins weeks or even months after the products of conception have been passed. The curet reveals placenta-like tissue. A diagnosis of chorio-epithelioma should not be made from the scrapings alone unless coagulation necrosis of the mucosa is present, as the histologic pictures of hydatidiform mole and chorio-epithelioma are almost identical. The fundus may be enlarged and fungoid masses present in the cervix. Metastases are common, particularly in the lungs and veins. The Aschheim-Zondek test is positive. Total hysterectomy with removal of accessible metastases should be done. It has been noted that metastases have cleared up following removal of the uterus. Fortunately these tumors are rare.

The bleeding which accompanies ectopic gestation is irregular and muco-hemorrhagic in type. Novak states that the bleeding indicates that the fetus is dead. Before rupture, the history of missed or abnormal periods, the soft cervix, a palpable mass independent of the usually enlarged uterus, the frequent cramp-like pain which may be abdominal or rectal and the presumptive signs of pregnancy, all suggest the probability of ectopic pregnancy. The curet yields decidual cells. Puncture of the culdesac gives blood in the cases where tubal abortion or rupture has occurred. We diagnose more cases of tubal pregnancy than we find at operation, but this is a justifiable error on the side of safety, for the reason that a surgical lesion is usually present in the pelvis. In no other condition is it more true that "experience is fallacious and judgment difficult." The ideal treatment is removal before rupture. It has been widely taught that

following tubal abortion or rupture, immediate operation is imperative. These patients are frequently in extreme shock and pain, the blood pressure is under 100 systolic, pulse if obtainable is from 130 to 160, weak and thready. Surely this is not an ideal condition to withstand surgical assault. Polak deferred operation until the systolic blood pressure had reached but not exceeded 110. If the patient is living when first seen by the physician, there is no hurry—morphine and heat may be administered for pain and shock, and probably also a blood transfusion. Operation may be deferred until the patient's condition improves, whether it be a day or a week. Autotransfusion may be used, but it must be remembered that the patient's blood will be absorbed from the abdominal cavity. Additional operation, as appendectomy, should not be done under any consideration.

Placenta previa is recognized by the occurrence of painless hemorrhage in the last trimester of pregnancy. Ablatio placentae gives rise to uterine bleeding with pain in the last trimester of pregnancy. The hemorrhage may be concealed.

The uterine bleeding which accompanies the acute stages of pelvic inflammatory disease may be considered beneficial. It is Nature's method of depletion. Treatment is directed to the underlying pathology. Surgery has no place in the treatment of acute pelvic inflammation. Rest, sufficient sedatives and opiates to procure relief from pain and discomfort, local heat, elimination, abundant nourishment, foreign protein therapy and two to four weeks' time will cure 85 per cent of these cases.

The bleeding in chronic or recurrent pelvic inflammation is irregular and debilitating, and is usually a menorrhagia. It follows both the inflammation due to birth injuries and the recurrent bacterial infections. These conditions are the sequellae of acute inflammation. It is here that surgery has a wide and curative field. In birth injuries perineal repair, cervical amputation, or cauterization and suspension operations may be performed. In recurrent bacterial infections, releasing adhesions, salpingectomy, and sus-

pension of the uterus and ovaries, are usually indicated. It does not seem to be appreciated that the ovaries are very resistant to infection. The needless sacrifice of functioning ovaries continues almost unabated.

The uterine bleeding which accompanies new growths is a late symptom. Beginning as a spotting, it later becomes profuse. Differential diagnosis is imperative. Benign and malignant conditions may co-exist. The pathologist frequently reports carcinoma as an additional finding in a myomatous uterus. Benign hyperplasia and polyposis of the endometrium, myomata, carcinoma of the cervix or fundus, and the more rare sarcoma should be considered. A polyp frequently, and a myoma not rarely, may protrude from the cervix. Diagnostic curettage will decide the question of benign hyperplasia or polyposis and carcinoma of the fundus. In the treatment of myomata, conservation of function should be our first thought. Myomectomies are preferable to hysterectomies. Ovarian tissue can usually and should always be preserved if possible. It has not been proved that radiation treatment of uterine myomata acts in any way except by inhibiting or destroying ovarian function. Therefore, the radiation treatment of myomata is not a desirable substitute for surgery. Under present conditions, it seems best to treat a cancer of the cervix by radium, deep x-ray, and possibly surgery. Surgical diathermy is used as an aid to radium in the treatment of cervical carcinoma. In cancer of the fundus, the above sequence is reversed to surgery, deep x-ray, and possibly radium.

When uterine bleeding occurs in the absence of any normal pelvic findings, it is called functional hemorrhage. Novak states that 50 per cent of the cases of this type of abnormal bleeding occur near the menopause, 10 per cent in young girls, and the rest is spread through the menstrual life. It is usually a menorrhagia. A fairly constant finding is hyperplasia of the endometrial glands, descriptively called by Novak the "Swiss cheese pattern." A diligent search for focal infection, lues, chlorosis and other constitutional diseases should be made.

It is highly probable that the most frequent cause of these hemorrhages is an aberration of ovarian function. The treatment of this type of hemorrhage has run the gamut of surgical and medical therapeutics. Surgically, repeated curettage, removal of the ovaries, and even hysterectomy have been done. Medically, hygienic regimen, constitutional measures as iron, arsenic, endocrine products, ergot, quinine, stypticin, fibrogen, etc., are worthy of trial, together with local treatment both intra- and extra-uterine. A great advance was made when deep x-ray and radium therapy were introduced. The results of radiation therapy are prompt and fairly constant. We have records of patients ranging in age from 11 to 50 years. The amount of radium emanation is determined by the age of the patient, the result sought being a suspension of ovarian function without complete destruction of the ovary. These patients were warned that repeated treatment might be necessary. For functional hemorrhage near puberty we have followed Polak's rule of using 200 mg. hours. In older patients the dose varied from 400 to 700 mg. hours. The results on the whole have been very satisfactory. Curettage always precedes the insertion of radium. To induce permanent amenorrhea, we have found that 1500 mg. hours is the minimum dosage to be trusted. Of particular interest in the treatment of functional hemorrhage are the products containing the female sex hormone. Time will not permit a review of the monumental and important work in this field. Briefly, the anterior pituitary gland motivates the ovary by two, and probably more, hormones. One stimulates follicle formation and the other the luteinizing process. A preponderating influence of one or the other of these hormones results in menstrual irregularities, either amenorrhea or uterine hemorrhage. These two hormones are recoverable from the body fluids, and in large amounts from the easiest obtainable fluid, the urine of pregnant women. They are marketed in the form of vaginal suppositories (amniotin, theelin), for hypodermic injection (theelin, amniotin, antuitrin-S), and for oral administration (progynon).

While the whole field of female sex hormone therapy is clouded with uncertainty, yet the results are very encouraging. It is a paradox, however, that we should be treating amenorrhea and menorrhagia with the same product. Further investigation, which will isolate and standardize these hormones, is necessary. Just as the simpler radiation therapy has replaced more radical surgical measures in the treatment of functional hemorrhage, so we may look forward to the hormones of the anterior pituitary gland replacing radiation. Finally it should be em-

phasized that many cases of functional uterine hemorrhage recover spontaneously or with very little treatment.

We realize that this discussion has led us far afield. Abnormal uterine bleeding is a symptom and not a pathological entity. It challenges our diagnostic curiosity and taxes our diagnostic skill to determine whether its cause be obvious or obscure. We may paraphrase the famous dictum of Osler regarding syphilis by saying, "Know uterine hemorrhage in all of its manifestations and the knowledge of all pelvic pathology will be added unto you."

LOCAL ANESTHESIA IN THYROID SURGERY*

VIRGINIA C. VAN METER, M.D.
DENVER

Of the different types of anesthesia at our command, local anesthesia offers the greatest margin of safety in thyroid surgery. The thyroid is an extremely vascular gland, and with a local anesthetic one avoids the sudden engorgement which may prove fatal during the induction stage of a general anesthetic. For the patient with a damaged myocardium, the so-called goiter heart, local is a sheet anchor of safety and is the only anesthetic to be considered.

Local is the most economical of all anesthetics. Gas-oxygen may cost the patient from twenty-five to fifty dollars, ether from ten to twenty dollars, but local costs the patient nothing.

The extreme ease of administration of local anesthesia is well known. It is our custom to use small fine needles (number 27 gauge, one-half inch long) for the primary injection, making one skin wheal at a point located at the outer border of the mid portion of the sterno-cleido-mastoid muscle on each side, and three skin wheals in the midline. From each wheal the field is enlarged using 19 gauge needles that are from two and one-half to three inches long to extend the anesthetized area, injecting the anesthetic into the deeper tissues so as to include the majority of the branches of the III and

some of the II and IV cervical nerves supplying the superficial tissues of the neck and sterno-cleido-mastoid muscle. During the operation more solution is injected, first into the gland capsule, and later into the superior pole of each lobe as it is exposed. There need be no pain, for more solution can be injected at any time during the course of the operation.

The best results are obtained with one-half of one per cent novocain solution. Freshness, sterility and purity of the solution are absolutely essential. The ampoules dispensed by the various reliable pharmaceutical houses answer these requirements. It is rarely necessary to inject more than three ounces. Except in toxic cases where its effect is undesirable, we add from two to four drops of adrenalin solution to the ounce.

Another advantage is that the operating field is less crowded by eliminating an anesthesiologist and his apparatus. It is our practice to use a metal screen, similar to an ether wire, as a support for a sterile cloth goiter drape or screen which keeps all view of operative procedure from the patient and insures sterility of the field. This drape is fashioned with four pockets for instruments and on the opposite side, in the region of the patient's nose and mouth, is another pocket into which sterile rubber dam is slipped, thus keeping saliva, et cetera, from the oper-

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ative field should the patient cough or sneeze.

The efficiency of local anesthesia in thyroid surgery is enhanced by proper preliminary treatment and preparation of the patient. An extremely toxic person who is highly nervous and apprehensive and who has a high basal metabolic rate, when given the proper preliminary preparation—namely, rest in bed, high caloric diet, Lugol's solution, forced fluids, et cetera—often surprises the surgeon with his equanimity and complete cooperation at the time of operation.

In addition to the preliminary treatment that has just been referred to, so essential in toxic goiters, we use a routine of preoperative medication. This consists of the oral administration of three grains of sodium amytal the night before and again two hours before operation. A hypodermic injection of one-fourth grain of morphine and one two-hundredth grain of hyoscine is given one hour before operation. The combination of sodium amytal, morphine, and hyoscine produces a desirable drowsiness that really amounts to analgesia.

Under local anesthesia the surgeon can control bleeding more easily due to the constricting action of adrenalin on the blood vessels. In addition there is no relaxation of involuntary muscle as seen under general anesthesia. With the exception of the rela-

tively small number of persons who have an idiosyncrasy for morphine, postoperative vomiting is eliminated. Obviously this decreases the danger of secondary hemorrhage. Pneumonia, which may be another serious complication of a general anesthetic, is also prevented, because the patient is able to clear his throat voluntarily throughout.

With local anesthesia, the surgeon has complete cooperation of the patient at all times. It is a great comfort to be able to satisfy oneself that the recurrent laryngeal nerve has not been injured. This can be done at any time during the operation by asking the patient to say "E." Another advantage is the ability to expose any hidden bleeding points before closing the wound. This is accomplished by asking the patient to cough hard several times while the surgeon watches closely for bleeding vessels. The cooperation does not cease at this point but continues after the patient is sent back to his room. We ask him to lie quietly on his back for the first hour after operation. This cannot be expected of a patient who has had a general anesthetic and who may toss about restlessly while regaining consciousness.

In recurrent goiters with much scar tissue that makes the injection of a local anesthetic unsatisfactory, gas-oxygen anesthesia is to be preferred.

MEANS AND METHODS OF GOITER PROPHYLAXIS*

M. O. SHIVERS, M.D.
COLORADO SPRINGS

In the prevention of disease, the determination of its cause is essential if scientific prophylaxis can be satisfactorily carried out. In the face of such a premise, a discussion of the prophylaxis of diseases of the thyroid gland may be rich in misinformation and a "nebulous emanation of chaos."

It may be said without contradiction that diseases of the thyroid gland are assuming greater proportions throughout the civilized world than had heretofore been realized. This tragic disease has affected the popu-

lation of every nation to a greater or less degree, leaving in its wake not only physical and mental impressions horrible to contemplate, but also its tragic and devastating results. The death rate in some types of goiter in the states has increased nine times in the past twenty years. This leads us to the consideration of the fact that the incidence of the disease has increased.

What a pity this disease is permitted to rack its victims and leave them in the depths of a stale and unprofitable morass of weak intellectuality, when so much can be done to prevent its occurrence. We must organize in a generous and magnanimous way the

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prophylaxis of goiter and in the utilization of such preventive measures stamp out the more serious affections that follow in the wake of the goiterous family, as well as the occasional individual that develops the disease sporadically.

Study and research should be carried out in newly populated countries, where the disease is not endemic and the population generally are not suffering from the effects of the disease. Colorado offers excellent opportunities for original investigation of the disease. Means should be provided for our university to establish a department for students interested in the subject. Etiology is, of course, a matter of much concern to research workers. Individual investigators have accepted theories as to cause, but no single etiologic factor has been accepted by all students of the disease.

Heredity and water supply are considered the most important factors and infection and iodine deficiency the two most probable causes. Investigators agree that heredity plays its part in the causation and transmission of goiter and recognize "goiter ancestry" in cretins and deaf-mutes, and emphasize that the frequency of the two conditions is in proportion to the presence and duration of goiter in any community. One only needs to study three generations suffering from the disease to recognize the multiplicity of cases. Goiter impresses itself more permanently and destructively on its sufferers in a congenital and hereditary manner than any other pathological condition.

Water supply has always been considered a factor. The early studies of Barton and Livingston indicate that the people themselves held this belief. A recent personal study in the North Woods of Canada revealed the fact that the natives still claim that water is a cause of goiter and avoid drinking water from so-called "goiter wells." Many more recent investigators confirm the opinion that water is a factor in the etiology of goiter in both man and animals. Many scientific investigators agree that infection plays its part in the production of the disease. The work of McCarrison and Crotti is most outstanding. The theory that goiter

is a deficiency disease is accepted by many scientific investigators and research workers. The physiologic demands of the thyroid gland for iodine, necessary to combat the agents that cause the development of goiter, seems a proved fact.

In the consideration of means and methods, what is the duty of the physician to the American people relative to goiter prevention? Have we positive preventive measures? What are the effects of such measures on the human economy and what methods are we to use to accomplish the desired results? If a definite statement is made as to the certainty of prevention, it should be substantiated by facts. It seems that further researches are necessary to satisfy all investigators that prevention is a verity. To a large group of workers examples seem to easily establish definite proof of goiter prevention. Prevention should not only prevent the occurrence of the disease in man, but also the unhappy results that the affected individual must suffer.

The more common conditions that the goiterous victim must suffer from are disabled hearts, malignancy, and cretinism. Cretinism is the most serious of all consequences of the disease as there is so little to be done for the sufferer in a curative way. In fact, he will necessarily become a family or community charge. Goiter regions in our country have been spared from cretinism in endemic form. Who knows but that a few more affected generations will give to us the same sad state, so common in certain goiterous affected European countries. If prevention is to be effectual, we must prevent its occurrence in future generations. Many of the older countries have well established methods of prevention. Why should this great country wait for direful consequences before we realize our duty and take such precautions as are necessary to prevent the horrible consequences? Prevention of goiter in animals is an established fact and is in daily practice. Why not assume the same responsibility toward man and put all machinery at our command in motion to stamp out the malady. It is the duty of the people of Colorado, both pro-

professional and lay, to exert themselves to the utmost in this, the most preventable of diseases. To accomplish the prophylaxis of goiter we must utilize all preventive measures. Is the medical profession of our state ready to assume this responsibility? There must be a widespread dissemination of the knowledge of the principles of prevention. There should be no limitation to the investigation and research in the prevention of the malady.

Many individuals and agencies may be helpful in the prevention of goiter:

1. Obstetricians. They should know that the presence of goiter in the mother is of importance in the genesis of goiter in the offspring. They should be able to recognize the various thyroid states and their effects upon the mother. They should be able to inform the mother of the serious consequences, namely: mental deficiency, delinquency, and subnormality—that are sure to affect the offspring of such maternal ancestry. They should institute prophylaxis before the birth of the child and should recognize congenital thyroid disturbances and promptly administer preventive measures and thereby prevent the serious tragedies that are affecting so many children in our country. It is hard to understand why this group of well informed men are doing so little for this particular group, when so much can be done for these little sufferers who must face the impress of inherited physical and mental weakness. The obstetrician who fails to do his duty must surely suffer much mental anguish when he is brought to realize this tragedy in the families of such a procreation. We must interest this group of fellow workers, for it is the obstetrician and midwife to whom we must look for results in prevention of these permanent disabilities in children born of goiterous mothers.

2. Pre-school age must be under the influence of the pediatrician or family physician. Ideal prophylaxis may be instituted at this period of the child's existence.

3. Child welfare workers should devote more time to this condition. Much is said and done to prevent other pathological calamities but rarely, if ever, is anything done

to prevent and protect the child from this very serious malady. All educational influences should be used to disseminate knowledge of prevention.

4. Medical universities are giving very little consideration to the subject of prevention of goiter. Much time is devoted to surgical technic, the least important consideration of the whole subject.

5. Public schools offer a large opportunity for inaugurating plans of prevention. Public schools are in touch with a large number of the children of our state. This single means furnishes ample opportunity for free administration of preventive treatment during the school period. Children of school age readily accept health measures when intelligently approached. Public health examinations are made, and measures instituted to prevent smallpox, diphtheria, et cetera, but goiter prevention comes in for only a small share and many times is not mentioned. Teachers are examined for possible contagious and infectious diseases, but the goiterous condition, if present, is passed up as of no importance. Such a teacher, with a "big neck," is a poor example to the observing child of the seriousness of the disease. Teachers so afflicted should be advised of the serious consequences of such a condition.

6. The family physician who comes in contact with the people generally can accomplish much in the dissemination of the knowledge of prevention, as he is in daily contact with the entire population, and his advice is always considered of much value. He should be as interested in goiter prevention as he is in typhoid or malaria. The surgeon is doing his part, but is acting only in the capacity of the doctor years ago in treating smallpox.

7. Maternity clinics should be utilized to the fullest extent, as they would aid a group of individuals who can not be reached in any other way. Where such a means has been inaugurated, definite beneficial results have been realized.

8. Goiter should be considered a public health matter and programs to establish preventive measures should be undertaken. Dif-

fuse spread of diseases of the thyroid gland and its effects on succeeding generations constitute a problem of momentous contemplation. One only needs to investigate the institutions for the deaf and blind to ascertain that deaf-mutism is on the increase. City, county, state and national health bodies should give due consideration to the prevention of goiter. Surveys should be inaugurated. The public should be instructed as to cause and prevention. All agencies should work under a commission. European countries have demonstrated its value. The additional duties to our health departments would be of small moment and very effectual.

9. Press. "The lay press of our country is ready to see that health publicity is given from an unbiased and accurate viewpoint, if such information is submitted in a readable manner. Cooperation with the press should be encouraged, since publicity of this nature is far reaching in its effect on the people. If we expect the public to receive reliable information, authoritatively given—and this is what the public wants and sorely needs—such information must largely come through the press." One writer aptly states that "The physician is fully alive to the educative powers of the newspaper and periodical press, but he does not know how to use the mighty engine he has so long despised. There is much important information about prevention which should be communicated to the general public, but somehow he lacks the simple racy English in which to get it over, or the sense of form and accent which would make it interesting and attractive." The press is now showing every inclination to step in and use its influence in the prevention of diseases, and the profession should assume a like attitude. Both working hand in hand will accomplish much for mankind in establishing measures of prevention in the minds of the public.

Having given due consideration to means of prevention, what are our methods? Prevention must have to do with lack of iodine and combating of infection. The administration of iodine and maintenance of cleanliness are our chief methods of prevention.

All countries are enjoying improved water supply, largely free from bacterial invasions. Health departments are supplying pure milk and clean foods—all factors of great importance in the prevention of goiter.

Iodine is the most generally accepted preventive agent. The most opportune times to emphasize the importance of prophylaxis is during fetal life, early childhood, and adolescence. Fetal and maternal prophylaxis must be carried out by the obstetrician, be he general physician or specialist. If iodine is protective, how can it best be administered? Addition to water supply, addition to food by means of iodized salt, and administration directly to the people constitute the means. Prevention and treatment of goiter are not fully understood by either the physician or patient. Iodine is protective but not always curative. Both have made the mistake of utilizing iodine as a curative agent, often with detriment to the patient. Large doses of iodine have produced damage to the goiterous patient, and this mistake has led to much criticism of the drug as a preventive measure. The fault lay in the method and dosage and not in the drug.

Small doses of iodine can be administered to the child or non-goiterous adult with no resulting damage and with much benefit in a preventive way. Harmful effects can be prevented by adhering strictly to the suggestion—never give iodine in any manner to a goiterous individual, and administer it at stated intervals to the non-goiterous individual, be he child or adult. Compulsory administration of iodine is not acceptable to the public as yet. Most harm to the public from iodine is occurring in individuals who are taking the well advertised "goiter cures" that contain large amounts of iodine. Such cures should be regulated legally. Drug stores handling such cures should be advised of possible damage to the people and the press advised of the dire results from the administration of such remedies.

Iodized salt should be a household food for the children, but adults should use normal salt, and thus avoid possible damage. The conception of the iodine administration to the goiterous individual is still an unset-

tled matter. Further research and study should be given to the subject. Acutely ill patients with hyperthyroidism can be given iodine at stated intervals with benefit and no harmful results. It should not be administered indefinitely for fear of damage. More rigid administration of iodine to goiterous mothers must be enforced. If some pre-existing infection is present in the mother, attention must be given to the condition. Daughters also should be given like consideration in the presence of such contingencies. The administration of iodine during pregnancy is of great importance. No other means so protects the offspring from congenital thyroid disease. Thyroid extract should be given to the mother suffering from the hypothyroid state; also iodine should be administered under the same conditions and cautiously given at stated intervals in the presence of hyperthyroidism where surgery is not indicated. To the child that is handicapped by the effects of insufficient thyroid secretion, be it congenital or acquired, certainly thyroid extract should be given in as large doses as is consistent with the B. M. R. It is in this group that we may expect phenomenal results in a large per cent of those suffering from mental retardation and marked effects in the cases suffering from the more serious consequences of congenital goiter.

The use of preventive measures is ill advised in individuals, young or old, in which thyroid enlargement is in evidence. This group should not be under the control of public officials, but should be under the care of the individual physician. The disease has stamped itself upon the individual and necessarily can not be prevented, but can be arrested or cured if properly supervised and treated.

Since there have been well established principles worked out and definite plans evolved whereby concerted action will bring much desired results in the prevention of diseases of the thyroid gland, may we hope that all means and methods be used by every agency mentioned to stamp out the disease in Colorado, a possibility in the next generation, and be in accord with the statement of

Kimball, "The same imagination which developed the practical application of the prevention of goiter can now see a few generations hence the closing chapters on endemic goiter and cretinism in every civilized nation in the world."

ABSTRACT OF DISCUSSION

Arnold Minnig, M.D., Denver: I think the best way to learn about cretinism is to go to one of these institutions for the feeble-minded, such as at Ridge, and see the effect this iodine deficiency has on cretins and see what a hopeless outlook they have.

In the prevention of cretinism, I want to emphasize that after a cretin is once born, it is pretty hopeless. The time to treat cretinism is before the child is born. These mothers should have basal metabolism tests; we know that these rates in a pregnant mother run about plus 20, contrasted to up to 10 in the normal. If a pregnant mother has not a plus 20 basal metabolic rate, it is below normal and should be investigated. The other early indication of cretinism is marked over-weight at birth.

Dr. Shivers said that in exophthalmic goiter, Lugol's solution must be used cautiously. It occurs to me that some of the later writings by people who are not partial to surgery indicate that this remedy is becoming a sheet anchor in the prevention and treatment of exophthalmic goiter.

Dr. Virginia Van Meter asked Dr. Fowler whether he was familiar with the work of Dr. Marine. I am familiar with that work; his conclusions and summary amount to this: Exophthalmic goiter is due to an irritation of the cortex of the supra-renal gland; the administration of the supra-renal extract to cases of exophthalmic goiter results in its cure.

O. S. Fowler, M.D., Denver: A number of years ago I was doing considerable thyroid surgery and made this observation: If I put a patient to bed for one to three weeks and gave him a large quantity of fluids, oftentimes the goiter would be so nearly disappeared that it would almost look ridiculous to operate. I have since had an experience incidental to haste in which a toxic goiter has been removed, and the patient is not entirely well. Those patients didn't come to me for the purpose of relieving the unrelieved goiter symptoms, but rather for the apparent renal situation.

After observing these things for a number of years, I have stated many times that goiters were at least half kidney function. I have recently discovered that in doing a nephrocystopexy as designated by Longier, it was called to my attention that I was possibly doing something to the adrenal gland. This suggestion was occasioned by a friend who had read Dr. Prior's article on the denervation of the adrenal gland in cases of unrelieved toxic thyroid. I have in recent months been studying the anatomy of the adrenal region and find that the anatomies vary a great deal in their description of the relations of the adrenal gland to its capsule and to its support; there are also variations in the description of the perirenal capsule and especially the support of the adrenal gland and the kidney. Some claim that the perirenal capsule passes between the upper portion between the kidney and the adrenal gland; others claim that the perirenal capsule passes upward to the diaphragm both in front

and behind one kidney, and the adrenal gland is attached to the diaphragm in an area of about an inch and a quarter. In general visceroptosis, attention has never been called to the possibility that there was pathology thereby obtained including renoptosis, and it is rather surprising to me that something of such importance as the adrenal gland has lacked adequate consideration. I have been able to tell my patients what they could expect from nephrocolopecty, but did not know just why and how all those benefits were obtained.

I have shown that the symptoms we have ascribed to visceroptosis are similar to those of Addison's disease. There is a close similarity of general visceroptotic, Addison's disease, and typical toxic goiter symptoms. This does not necessarily open a field that will explain all types of goiter, certainly not the endemic type, but it opens a field of extreme interest and of possible research that may elucidate the etiology of this condition, which we have admitted we do not know.

S. D. Van Meter, M.D., Denver: For obvious reasons I do not care to discuss my daughter's paper, but in answer to Dr. Shivers' reference to the fact that the majority of thyroidectomies are done under general anesthesia—that fact does not make it right.

I was interested in Dr. Minnig's discussion, but if he will go a little deeper into statistics of the treatment of toxic diffuse goiter, he will find the number of cures by non-surgical means is very limited. I do not question that a limited number of cases of toxic diffuse goiter or Graves' disease are cured by rest and iodine, but careful search will reveal that the number is extremely few, and the mortality of the cases that are treated in this manner is far higher than that by surgery.

Where we find one non-surgical cure we see many failures and "goiter wrecks" that have been treated by such means. When those cases finally come to surgery, they are the hardest we have to contend with.

I am interested in Dr. Fowler's suggestion relative to the role that the suprarenal gland plays in hyperthyroidism. I had the pleasure of listening to the delivery of Dr. Crile's recent address at Hamilton, Ont., on this subject, and must confess that with all his ability and eloquence, I felt that his conclusions were paradoxical. However, when we finally know the inter-relation between the suprarenal and the thyroid glands, we will undoubtedly find that in some cases the suprarenal does play a part in the etiology of hyperthyroidism.

Dr. Fowler's argument that it is a hypo-adrenalism rather than a hyper-adrenalism I think is logical. If it were the sole cause of hyperthyroidism, however, we would not cure so many cases by thyroidectomy. It may be that it is a factor in certain cases and not so in others. We all know that the black beast of goiter surgery is a case of recurrent hyperthyroidism. We all see them, and all regret having to re-operate them. Some are never cured, but the percentage of those cases fortunately is not large. It may be that these cases are the ones that are particularly influenced by dysfunction of the suprarenals and are benefited by nephropexy and denervation of the suprarenals.

R. F. Graham, M.D., Greeley: May I ask Dr. Fowler if in these patients which he cures by his correction of nephroptosis, he describes the symptom group which may be called a near Addison's disease because of insufficient adrenal extract; I wonder if he has put them to the acid

test of giving his patients preoperatively, perhaps, the cortical extract such as has been developed by Pfeiffer and Stengeler of Hartmann, to see if that extract would cure his patient without the necessity of operation?

Dr. Fowler: We have not done that as yet; we have considered it.

Dr. Shivers (Closing): The paper of Dr. Van Meter and the discussion of Dr. Fowler have opened up a very important field of discussion. We have all observed the beautiful work done by the Doctors Van Meter, and none of us could object to local anesthesia. The consensus of opinion is that 80 per cent of the surgeons use combined anesthesia. There is a group of patients (3 or 4 per cent) that do not have recurrent goiter, but still have tachycardia, weakness, high basal rate, and other symptoms of hyperthyroidism. There must be some conditions that are producing these symptoms other than goiter.

The introduction of Dr. Fowler's work here seems to me to throw some light on the subject. It may be, in place of the pathological condition of the adrenal gland being the cause of goiter, that we have an association of two distinct conditions. His work may be of sufficient importance to justify our going back and taking care of this phase of the subject by doing certain surgical procedures on the adrenal gland, and thereby cure these 3 or 4 per cent failures that have so far baffled the skill of the most experienced in the field of goiter. His work is most interesting, not so much from an etiological standpoint, but the possibility of cure for a group of patients who are giving all of us much concern.

The Medical Profession and the Financial Depression

Physicians generally and specialists in particular are suffering from the most severe slump known to the medical profession. It of course is the result of the unprecedented financial depression of the country, which forces even those who were rich to practice every severe economy and in many cases avoid consulting physicians if possible. Operations that are absolutely necessary are performed as heretofore, but those which are not are postponed until better times. Many patients who in other days would have paid a surgeon's fee without demur and had operations performed in a nursing home now find this beyond their means and go to swell the crowds at the hospitals. Another result is that in many cases fees have had to be reduced. Those who suffer least are the panel physicians, whose income is guaranteed by the state. It is true that they have suffered a small cut, but it is trivial compared to the losses of those who rely on private practice.—J. A. M. A.

Theophyllin, when called Theocin, costs 203 per cent more.

CASE REPORTS

CARCINOMA OF THE APPENDIX

C. RICHARD SMITH, M.D.*

DENVER

Among 1164 appendices removed surgically at the Denver General Hospital between January 25, 1926, and January 1, 1933, there was one appendiceal carcinoma.

REPORT OF CASE

A female Mexican was admitted to the hospital complaining of attacks of abdominal pain and vomiting over a period of four months. Examination revealed tenderness in the right iliac region. The temperature was 99°, the pulse 84, the white blood cells 10,600 with 55 per cent polymorphonuclears. A diagnosis of chronic appendicitis was made. At operation the appendix was found bound to the cecum by adhesions.

Pathological examination: The specimen consists of two tortuous pieces of appendix 1.5 and 2 cm. in length. Both fragments are thickened, injected and covered with a fibrinous exudate. The greatest diameter, corresponding to the middle of the organ, is 12 mm., the least, 6 mm. Sections through the thickest part reveal an eccentric, mottled-yellow tumor mass completely filling the axial portion of the appendix and involving the muscle wall on one side. The muscle wall here is hypertrophied to a maximum thickness of 6 mm. (Fig. 1).

Microscopic examination shows the tumor to be made up of solid groups of cells in a stroma of connective tissue or smooth muscle. These cells have invaded the hypertrophied muscularis and the thickened serosa on one side to form tumor nests therein. Three to five vesicles of high columnar epithelium representing the remains of the normal mucosa may be seen in the axial region in some sections. Here and there in this central region is a remnant of lymphoid tissue. The tumor nests vary from two to three to several dozen component cells. There is usually no definite arrangement of the cells although, occasionally, there is evident an alveolar-like structure with a lumen containing a homogenous pink-staining material. There is no intercellular substance. There are no ducts. Blood channels are not numerous (Fig. 2).

The cells are polygonal, pyramidal, and unusually columnar in shape. The nuclei are large, round, and deep-staining. The cytoplasm contains tiny eosinophilic granules. Cell borders are not definite. There are no mitotic figures. Cytoplasmic granules were found to stain black in an ammoniacal solution of silver nitrate (Fig. 3).

Diagnosis: Carcinoid tumor of the appendix.

Historical

Perhaps the earliest authentic report of carcinoma of the appendix was made by Beger¹ in 1882. This was a case of adeno-

carcinoma primary in the appendix with secondary involvement of the cecum. The first important paper on the subject was published by Elting² in 1903. It includes a review of forty cases found in the literature and a report of three new ones. Of the forty cases studied he concluded only twenty were authentic. Elting mentions Merling's description in 1838 of an appendiceal tumor, probably a carcinoma, although not proved by microscopic examination.

Following Elting's paper and that of Moschkowitz³ in the same year, increasing numbers of carcinomas of the appendix were diagnosed and reported. McWilliams⁴, in 1908, collected ninety cases, Reid⁵, in 1928, 350. Together with Reid's series, in an

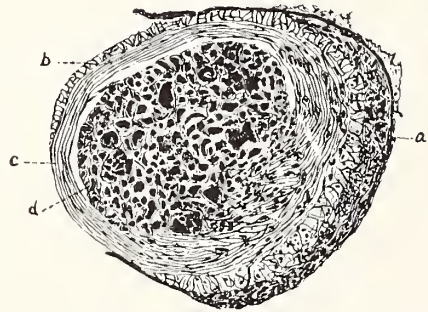


Fig. 1. Diagram of a cross-section of the appendix showing infiltration by tumor cells of the greatly thickened muscularis and serosa; (a), serosa; (b), longitudinal muscle; (c), circular muscle; (d), central tumor mass.

incomplete survey of the literature to date, I have been able to find records of 425 cases.

Pathology

Two types of carcinoma of the appendix are generally recognized, adenocarcinoma and carcinoid tumor. The former is composed of cylindrical cells derived from the appendiceal mucosa. It is definitely malignant and analogous in most respects to the usual adenocarcinoma of the large bowel. In the appendix it is most often situated at the base. This suggests the possibility, in some of these cases, of the tumor really being primary in the cecum.

The carcinoid tumor (round cell carcinoma, medullary carcinoma, argentaffin tumor) makes up the majority of appendiceal carcinomas. This is a rather peculiar growth whose chief characteristics may be

*Dr. Smith was Resident in Pathology at the Denver General Hospital. He has an extensive list of references upon this subject and will gladly supply them upon request. Present address: Barlow Sanatorium, Los Angeles.

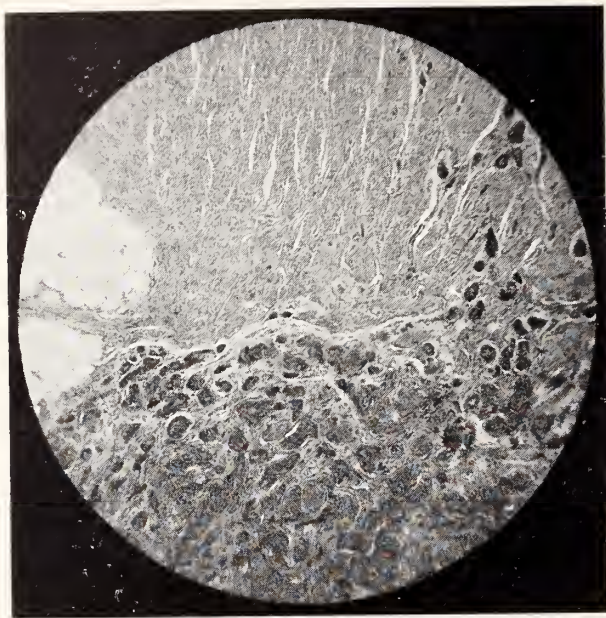


Fig. 2. Low power view of the junction of the tumor mass and the muscularis. Note carcinoid nests which have invaded the muscle wall.

summed up as follows: (1) Solid nests of polygonal cells in a stroma of connective tissue or smooth muscle. There is no true glandular structure. (2) Low malignancy. It only occasionally penetrates the appendiceal wall and rarely metastasizes. Mitotic figures are unusual. (3) Early age incidence. Most cases fall within the second, third, and fourth decades.

The tumor develops in the submucosa of the appendix, but later may invade the muscularis or even the serosa. It appears usually as a pea-sized nodule or swelling near the tip of the organ. Section shows the substance to be yellow. Elsewhere in the gastro-intestinal tract, but principally in the small intestine, it occurs as multiple, small, discrete nodules in the submucosa. Lubarsch⁹ in 1888, first differentiated this interesting non-glandular neoplasm of the gastro-intestinal tract from adenocarcinoma in a study of two cases of multiple tumors of the ileum found at autopsy. By serial sections he demonstrated the epithelial nests to be connected with the crypts of Lieberkühn. Bunting⁷, in 1904, offered similar evidence, pointing to the crypts of Lieberkühn as the origin. According to Forbus⁸, Oberndorfer first proposed the term carcinoid tumor in 1907. Oberndorfer later described a chromaffinity of carcinoid tumor cells similar to that of

the chromaffin cells of the adrenal medulla. Some men have for this reason considered the carcinoid to be a tumor of the chromaffin system.

Chromaffin cells, known as yellow cells or Nicholas-Kultschitsky cells, are normally present in small numbers throughout the gastro-intestinal tract, found chiefly in the depths of the crypts of Lieberkühn wedged in between the epithelial cells of the mucosa. In 1914, Gosset and Masson⁹ reported the interesting observation that both Kultschitsky cells and carcinoid tumor cells contain silver-reducing granules. It seems then quite probable that carcinoids are derived from the Kultschitsky cell or its parent.

Carcinoids have been called argentaffin tumors by Masson¹⁰, MacCallum¹¹, Forbus, and others, because of this silver-reducing property. Indeed, the argentaffin reaction has been taken by some as the sine qua non of carcinoid tumors. Masson, however, and, recently, Forbus¹² have indicated that the reaction is not necessarily specific.

P. Masson of Montreal has done perhaps more work on the pathogenesis of appendiceal carcinoid than any other. His principal findings may be summarized as follows: Epithelial cells bud off from the crypts of Lieberkühn, pass within nerve fibrils into the submucosa or muscularis where they

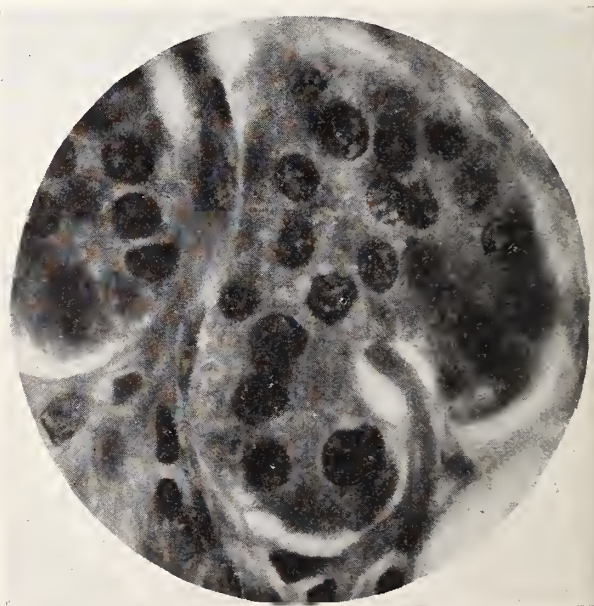


Fig. 3. High power view of a carcinoid cell nest.

multiply, rupture the sheaths, and form tumor nests in the tissue substance. While in the nerve fibrils the cells acquire the argentaffin reaction. Carcinoid cells contain lipid-filled vacuoles as well as chromaffin granules. The cells are endocrine in nature. Carcinoids are endocrine tumors. Within the nerve fibrils the cells secrete a material which stimulates the nerves and causes a hypertrophy of associated smooth muscle.

Malignancy of the Carcinoid Tumor

Milner¹³ declared it to be an inflammatory growth. Gosset and Masson considered it histologically malignant but added that the malignancy "is gentle and attenuated." Bunting compared it to the basal cell carcinoma of Krompecher. Wilmoth¹⁴ compared it to giant cell sarcoma. In 1925, Forbus stated his belief that argentaffin tumors never metastasize. He later revised this opinion with mention of a case of his own showing metastases to the liver. He added, however, that he knew of no case in which death was due directly to the tumor or its metastases. Dahl¹⁵ believes the only malignant effects are mechanical in nature.

A few cases of malignant carcinoid have been reported. In 1926, Stewart and Taylor¹⁶ collected seventeen from the literature. Eight of these were primary in the appendix and nine in the small intestine. Secondary growths were found in the peritoneum, liver, regional lymph nodes and pleura, in that order of frequency. The same authors reported their own case of argentaffin tumor of the appendix with large secondary deposits in the pelvis. The patient was alive ten years after operation. In 1931, Cooke¹⁷ listed 104 cases of carcinoid tumor of the small intestine, twenty-one of which were malignant with invasion of the serosa, metastases to lymph nodes, liver, and other structures. Ten of the malignant and six of the benign tumors caused intestinal obstruction. Cooke also reported his own series of eleven carcinoid tumors of the small intestine. Three of these were malignant with metastases to the liver and lymph nodes. Death of the patient resulted in all three, in two postoperatively.

In Mörl's series of eleven cases of carcinoid tumor of the appendix¹⁸, death oc-

curred in two. In the first, the tumor caused perforation and fatal peritonitis. In the other, the condition was discovered at autopsy. There were metastases to the omentum, mesentery and pleura. Knoflach¹⁹ reported a case of gangrene of the intestine due to invasion of the mesocolon by an appendiceal carcinoid. The patient died following operation.

It is evident from the above that the carcinoid tumor does metastasize to distant points and that it can bring about circumstances which eventually lead to death. There are records available of eleven cases of metastasizing appendiceal carcinoid, and it is possible to estimate a malignancy rate of 2.8 per cent in 388 tumors.

Occurrence of Carcinoma of the Appendix

The incidence has varied from less than .1 per cent to 1 per cent in different series. MacCarty and McGrath²⁰ reported forty carcinomas among 8039 appendices removed at the Mayo Clinic up to 1913, a rate of .49 per cent. Selinger²¹ reported an incidence of .35 per cent. Norment²² collected sixty-seven carcinomas occurring among 45,000 appendices, an incidence of .15 per cent. According to Stämmeler²³, only 2 per cent of all intestinal carcinomas are appendiceal. Of Selinger's thirty-four cases, five were of the columnar cell type, all five being located at the base of the appendix. Of 425 cases collected here, thirty-seven or 9 per cent were adenocarcinomas.

Age: McWilliams gives the average age for the columnar cell type as 43.5, for the round cell type as 23.5. Norment gives the age distribution in his series as follows: First decade, 1; second, 6; third, 16; fourth, 16; fifth, 17; sixth, 4; seventh, 8. The average age was 38.

Sex: Carcinoma of the appendix has been found most frequently in the female. In the series of MacCarty and McGrath, 73 per cent of the cases were in females and, in Norment's series, 67 per cent. This inequality of the sexes is attributed by some to the more frequent inflammatory conditions of the female pelvis as well as to the more frequent appendectomies in the female.

Location: The great majority are found at or near the tip of the appendix. This was

true in 92 per cent of the cases in the series analyzed by Norment.

Symptoms

There may be no symptoms at all, the tumor being found by routine biopsy or autopsy. There may be the usual symptoms and signs of appendicitis. In Selinger's series, nineteen of the tumors were found incidentally, ten were found in cases diagnosed as acute appendicitis, and five in cases diagnosed as chronic appendicitis. MacCarty and McGrath gave the average duration of symptoms as 3.3 years. Of Mörl's eleven cases of carcinoid of the appendix, one was asymptomatic, seven gave symptoms of chronic recurring appendicitis over periods of three weeks to four years, and three showed symptoms of acute appendicitis. No one has described any symptom or sign characteristic of the condition. So far as I know, carcinoma of the appendix has never been diagnosed clinically.

Summary

1. A case of carcinoid tumor of the appendix is presented.
2. The earliest authentic report of carcinoma of the appendix is considered to be that of Beger in 1882.
3. Carcinoma of the appendix may be grouped into two classes, adenocarcinoma and carcinoid tumor, the latter making up the great majority of the cases.
4. Carcinoid tumor of the appendix is characterized by a non-glandular arrangement of round cells, low malignancy, early age incidence, chromaffinity, and argentaffinity.
5. Carcinoids probably originate from the Kultschitsky cells of the crypts of Lieberkühn.
6. Carcinoids manifest a type of malignancy in about 3 per cent of the cases.
7. Carcinoma is found in about .4 per cent of surgically-removed appendices. The average age incidence is about 35. Approximately 70 per cent of the cases are in females.
8. Symptoms may be entirely absent or may be those of appendicitis, acute or chronic.
9. Four hundred twenty-five cases of

carcinoma of the appendix have been collected from the available literature. Of these, 388 are carcinoid tumors.

EXTENSIVE INJURY BY A MUSH-ROOM BULLET

R. B. PORTER, M.D.

GLENWOOD SPRINGS

The following is a most unusual case, in which I was so fortunate as to have Dr. W. J. Mayo in consultation. It demonstrates a surprisingly favorable result from conservative surgery in a devastating bullet wound:

Mr. F. F. F., aged 35, laborer, was shot while hunting, September 4, 1932. He was running and fell with a 30-30 Winchester loaded with mushroom bullets. The gun discharged and a bullet entered the left groin two and one-half inches from the symphysis. The bullet ranged downward and split the left scrotum and amputated the left testicle. It tore through the inner side of the thigh, lacerating the muscles and denuding an area about six by seven inches where the skin was entirely gone. The penis came out under the skin in the opening where the left testicle was torn off. The penis was split and the entire corpora was gone. The upper part of the glans was shot away. The penis was "wrong side out" and was entirely denuded of skin. I had never seen anything like this, so I called Dr. W. J. Mayo, who was in Glenwood Springs on his vacation. He kindly consented to see this man. I had seen the man at 2:30 a. m. and could not make up my mind what to do. While Dr. Mayo and I were discussing his condition, I suggested that the penis was wrong side out. Both of us thought this impossible. To find out, I pushed the penis up through the scrotum and it came out where it should be. The skin of the penis turned back out and was not injured in the least.

The skin of the penis not being injured caused me to wonder how the bullet could do so much damage to the denuded penis and not leave a mark on the skin. There is no doubt in my mind that the penis being turned wrong side out was due to the concussion, as the skin of this organ was not injured. From where the bullet entered the groin about on a level with Poupart's ligament to the denuded area on the inner side of the thigh, was a normal bridge of skin that the bullet had ploughed under.

Three hours after the consultation, I operated. On opening the tear in the left scrotum, the spermatic cord was hanging free without a particle of testicle attached. This was cut off short after ligating. On examining the denuded area on the thigh, I noticed what at first appeared to be torn strips of muscle. They did not look just right, and after more careful inspection I thought they might be the cavernous bodies. On tracing them back under the bridge of skin mentioned above, I discovered they were attached to each side of the pubis at the base of the penis. I then knew what they were. These bodies were bleeding quite freely from many small veins. Therefore, I knew the blood supply was all right. A hemostat was run through the meatus of the foreskin and the cavernous bodies were pulled to

the back of the organ, where they fitted perfectly. A careful inspection was made of the denuded penis. I found the urethral canal was all destroyed in the body of the penis except about an inch in length and an inch posterior to the meatus. The bulbous portion was torn through. The urethral canal was completely destroyed except a small area about one-half inch long in the bulbous portion.

The scrotum was sutured, the cavernous bodies pulled through the skin of the penis and sutured in place. A catheter was placed in the bladder passing it through the two remaining normal areas of the urethra in the bulbous portion, and at the anterior one-third of the body. The tissues were sutured around it at the glans. The glans being severely burned and lacerated, it was doubtful as to its holding. The foreskin was split three-fourths of an inch to allow for swelling. The catheter was left in for four weeks when it came out accidentally. It was promptly replaced but was again forced out in several days. It was left out a few hours for lack of time to replace it. In the meantime, the patient voided naturally; therefore the catheter was not replaced. He continued to void until leaving the hospital seven weeks after the accident. A number seventeen catheter was passed once a week and there was no trouble in inserting it at any time. Each time the catheter was passed it was left in four hours for the dilating effect.

The only unfortunate event in the recovery was the dorsal part of the glans sloughed and the meatus opened on the dorsal side of the penis three-fourths of an inch from the distal end. This slough was down to the spongiosa, and the end of the penis was flabby and pendulous. After six weeks he could have an erection in all but the anterior one-fourth of the penis.

Two weeks after the accident the denuded area on the inner side of the thigh was clean and granulating. The skin was undermined and drawn together with mattress sutures. This promptly closed without skin graft as was anticipated in the beginning.

The patient was to return every two weeks to have a catheter or sound passed. He has been advised that the urethra may contract and at a later date it may be necessary to do a plastic operation to build a new urethra.

It seems that this case shows the advisability of doing conservative surgery, as the first thought was to amputate what penis was remaining.

On December 13, 1932, the patient came in feeling well, weighed 145 pounds. He had been cutting posts. On May 3, 1933, the patient reported ability to have erections and coitus, but with the distal end still pendulous.

Theobromine Sodio-salicylate, when called Diuretin, costs 430 per cent more.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Sunlight and Health

Excess of sunlight is known to cause two types of disturbance, physical lassitude, and nervous irritability, the former apparently due to the heat, the latter to the light radiations particularly. Insolation or "sunstroke" may be produced by excessive heat in the absence of sunlight. It may well be that the growth and development of children and adults suffer from insufficient sunshine or skyshine in other still unrecognized ways, but at least there is no disease entity now described other than rickets which is believed to be due to such insufficiency. Man's eyes suffer, and his effectiveness in near and far vision work is reduced when artificial light falls too far below the quantity and quality of sunlight. It is to sunlight that our eyes are biologically best adapted.

There are psychological values in sunshine well recognized in the treatment of disease, and particularly in the management of chronic and convalescent patients, and it may fairly be assumed that the delight in the presence of sunlight, indoors and out, from infancy to old age, which is quite universal, is based on physiological benefits, whether they be because of warmth, dryness, ease of work, wider range of pleasures, range of color and form to delight the eye, or the feeling of euphoria that mankind gets from having his place in the sun. Sunlight assists in the healing of wounds on the surface of the body, relieves some of the pain of damaged tissues, and improves the bacteriological properties of the skin in and about the wound. Apart from these subjective, personal, bodily and spiritual relations of sunlight to health there are the objective or environmental effects of sunlight upon which some of man's safety from his biological enemies depends.

Sunlight and skylight in proportion to their intensity and duration will sterilize surfaces exposed to them, and will even penetrate with bactericidal effect into the unbroken skin, only a fraction of a milli-

meter in the normal blood-filled tissue, but as far as 4.25 mm. into the skin made anemic by pressure. This bactericidal effect, which is greatly reduced when radiations must pass through ordinary window glass obliquely into a room, is by a direct action on the cells, and not by the intermediate development of hydrogen peroxide or other chemical, and it is due to the photo-chemical capacity of the cell to absorb ultra-violet rays. In addition to this effect, bacteria may be destroyed by the dehydration and oxidation caused by the heat rays of the sun.

The long red and infra-red rays have effects upon the skin even when they are not appreciated by the eye as light. There has been recent suggestion offered by Leonard Hill of London to the effect that there are selective effects of some of these long infra-red rays coming from an open fire or incandescent gas heater or dark electric radiating heater plate which favorably affect the mucous membrane of the nose and throat by reducing turgescence, and tend to prevent colds. This suggestion will need much confirmation before it can be accepted.—From an article by Dr. Haven Emerson, in *American Journal of Public Health*, May, 1933.

Public Health in a Year of Stress

The annual report of the Detroit Health Department shows a new low general mortality rate of 8.7 and a new low tuberculosis rate of 70.3 together with freedom from smallpox. The diphtheria death rate of 4.3 is contrasted with that of 6.3 for 1931. There were but fifty-seven cases and nine deaths from typhoid fever, giving a death rate of 0.6. Also commendable is the infant mortality rate of 52.3, which is less than half the rate for 1920.

"No medical man, regardless of his present position, is so situated that he can withhold his support from organized medicine without detriment to himself as well as to others."—*Milwaukee Medical Times*.

Never believe what a patient tells you his doctor has said.—William Jenner.

BOOK REVIEWS

Senile Cataract. Methods of Operating. By W. A. Fisher, M.D., F.A.C.S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. With the collaboration of Prof. E. Fuchs, Vienna, Austria; Prof. I. Barraquer, Barcelona, Spain; Dr. H. T. Holland, Shikarpur, Sind, India; Dr. John Wesley Wright, Columbus, Ohio; Dr. A. Van Lint, Brussels, Belgium; Dr. O. B. Nugent, Chicago, Illinois. 267 pages, 183 illustrations, 112 of which are colored. Published by Chicago Eye, Ear, Nose and Throat College, Chicago, Illinois, U. S. A.

This second edition is published ten years after the first. The chapters contributed by other writers have undergone but little change. Chapters in which Colonel Smith formerly described his method of intracapsular extraction have been omitted. The chapter by Van Lint of Brussels is new, and another chapter is added by O. B. Nugent.

The author is well known as an eye surgeon, and particularly for his work on intracapsular extraction by the suction method. One of his most interesting suggestions is as to the use of the eyes of freshly-killed kittens for practicing cataract extraction and other ocular operations. A rather pathetic portrait of two kittens wearing ribbons is reproduced, not in the chapter on the method of acquiring technic, but under the heading of bifocal glasses.

W. H. CRISP.

Diseases of the Heart. Described for Practitioners and Students. By Sir Thomas Lewis, C.B.E., F.R.S., M.D., D.Sc., LL.D., F.R.C.P., Hon. D.Sc., (Michigan) Physician in charge of Department of Clinical Research, University College Hospital, London. Physician of the Staff of the Medical Research Council; Physician in Chief (Pro Tem.) Peter Bent Brigham Hospital, Boston; Honorary Fellow New York Academy of Medicine; Corresponding Member Association of American Physicians and Interstate Postgraduate Medical Association. 1933. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 297 pages. Price, \$3.50.

The author needs no introduction. This volume contains thirty chapters, including chapters on the Thyrotoxic State; Rheumatic Carditis; Syphilis of Heart and Aorta; Heart Strain, Work and Failure; Effort Syndrome; Pulmonary Congestion; Edema and Infarction; Bronchitis and Emphysema, and a chapter on the Effects of Child-bearing on the Heart. The author has presented the most common diseases of the heart in a clear and concise manner for the general practitioner or the specialist who wants guidance that is authoritative. The chapters on the arrhythmias and disorders of the heart-beat are excellent. There is also an instructive dissertation on the differential diagnosis of fainting from vascular causes and of cardiac syncope, as contrasted with unconsciousness from cerebral disease.

In conclusion I wish to say that this new book on *Diseases of the Heart* is considerable more than just another book, but is the work of a master presented in a beautiful style.

MORRIS J. KROHN.

The Law Against Abortion. Its perniciousness demonstrated and its repeal demanded. By William J. Robinson, M. D., Editor of the Critic and Guide. Consultant to the Bronx Hospital. Fellow of the American Medical Association and of the New York Academy of Medicine. Member of the New York State and New York County Medical Society; The American Association for the Advancement of Science; Founding Member of the World League for Sex Reform. Back to the Roman Law "Infans Pars viscerum Matris!" The Fetus is part of the mother's organs. Therefore she alone has the right to decide about it. Prof. J. Kocks, Bonn, Germany. New York: The Eugenics Publishing Company, Inc. 1933. 123 pages. Price, \$2.00

A book demanding the repeal of laws against abortion.

It is rather sensationally written and will appeal more to the laity than to the medical profession.

E. L. HARVEY.

Recent Advances in Obstetrics and Gynecology.

By Aleck W. Bourne, M.A., M.B., B. Ch., F.R.C.S. (Eng.), F.C.O.G., and Leslie H. Williams, M.D., M.S. (Lond.), F.R.C.S. M.C.O.G. Philadelphia: P. Blakiston's Son & Co., Inc., 1932.

This rather small volume, a third edition, is arranged to set forth certain recent advances in obstetrics and gynecology. Only that new work which has been tested sufficiently to established it as of practical and permanent value is contained. The opinion of former theories are incorporated among the recent advances, making it a fairly complete survey of ideas, old and new.

Considerable stress has been given to prenatal care. Considering the immense amount of ill health and disability which can be prevented by antenatal supervision and the proper conduct of labor, too much emphasis cannot be laid to the necessity of a thorough consideration of this branch of preventive medicine.

Regarding maternal mortality, England and Wales rank fourth among the European nations. This book shows the effect of a careful study of the causes of maternal mortality. As in America, sepsis represents the greatest number of deaths; toxemias are second, then accidents of child birth, hemorrhage in pregnancy and labor, accidents of pregnancy; ectopic pregnancy and abortions follow.

The chapter on the causes of fetal death gives a review of the work of Holland and other collaborators—a valuable work familiar to all interested in this subject. There is a good review of the subject and treatment of placenta previa. In a study of cases in the Queen Charlotte Hospital, 1926-30, Cesarean section produced the best results for mother and child in central, marginal, and lateral varieties. Regarding forceps operations, the very important observation is made that the bad results are largely due to the too early application of the instrument, and before the cervix is completely dilated. There are well arranged chapters on anesthetics in labor, x-ray work in gynecology and obstetrics, and carcinoma of the cervix.

The book is well worth while to one interested in the subjects of Gynecology and Obstetrics.

CLARENCE B. INGRAHAM.

Ten Years of Obstetrics and Gynecology in Private Practice. A clinical report of 1750 obstetrical and 1345 gynecological cases, with comparative analysis of many of the larger groups, and detailed case histories of some of the more important and less common conditions. By John L. Rothrock, A.B., M.D., F.A.C.S. Formerly Associate Professor of Obstetrics and Gynecology, University of Minnesota; Former Member of the Miller Clinic and Chief of the Obstetrical and Gynecological Services of The Charles T. Miller Hospital and The Amherst H. Wilder Dispensary, St. Paul, Minn. Illustrated. Paul B. Hoeber, Inc. New York. 1933. 209 pages, price \$3.00.

This monograph presents the clinical experience of a careful practitioner. Part I reviews 1750 obstetric cases and Part 2, 1345 gynecologic cases. All of these cases are from the author's practice. His preferred methods of treatment are stressed and illustrative case histories are included. In this book there is little information for the beginner. However, the older practitioner will find some value in comparing methods with the Author.

W. H. HALLEY.

Office Surgery. By Fenwick Beekman, M.D., Visiting Surgeon, Bellevue Hospital; Visiting Surgeon, Hospital for the Ruptured and Crippled; Consulting Surgeon, Lincoln Hospital; Clinical Professor of Surgery, N. Y. University and Bellevue Medical College. 94 Illustrations. Philadelphia and London: J. B. Lippincott Company. 402 pages, price \$5.00.

The author's premise that "there is no lesser surgery" is amply illustrated in his book. He fully explains what procedures may be safely carried out in the physician's office. An important feature of the book is the stress laid upon the diagnosis of apparently insignificant conditions which often develop into major surgical problems. The methods of treatment are those that have stood the test of time. The applicability of local anesthesia in the treatment of fractures is not covered. A fuller discussion of the treatment of fractures of the smaller bones which can be treated in the office would add to the usefulness of the book. However, the book is very readable and worthy of the attention of all who see surgical cases.

W. A. CAMPBELL, JR.,
Colorado Springs.

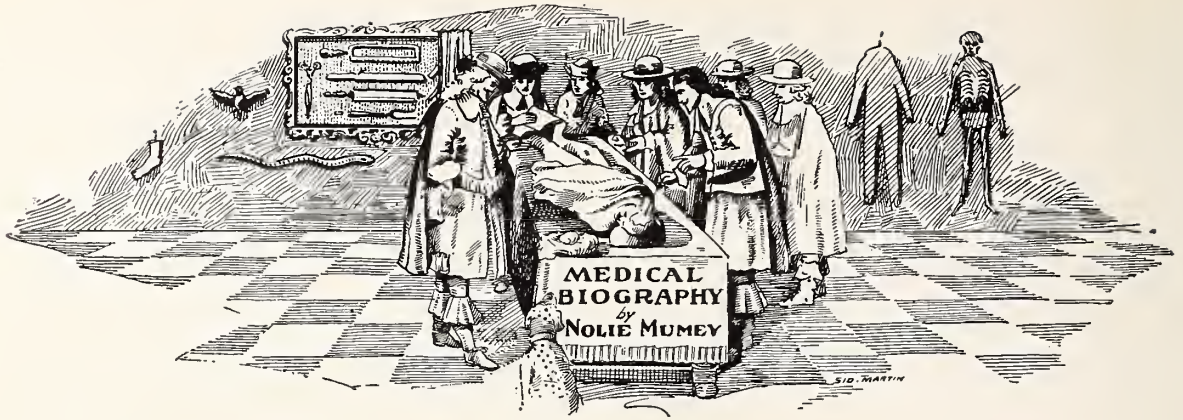
Transactions of The American Association of Obstetricians, Gynecologists and Abdominal Surgeons. (Issued annually)—1932, Volume XLV. Edited by Magnus A. Tate, M.D., Cincinnati, Ohio, and Arthur M. Mendenhall, M.D., Indianapolis, Indiana. Minneapolis and St. Paul: Bruce Publishing Co.

A book of this type is always interesting because it is very personal and generally in advance of texts.

This particular issue is of special interest in the great variety of its papers and the range of discussion, which always adds to the worth of any paper, original or otherwise.

It is impossible to review each essay and its discussion separately here, but let it suffice to say that each paper has been carefully prepared by an excellent authority. The variety of subjects are very practical and fascinating and, of course, the discussions always make any book worthwhile. Every obstetrician and gynecologist should read it.

H. B. HENDERSON.



SILAS WEIR MITCHELL

(Continued from August Issue)

Dr. Mitchell's novel, "Far Into the Forest," published in 1889, deals with paranoia. The trend of the story is very psychological. "Characteristics," published in 1882, is a medical character study, a series of conversations, and cannot be strictly classified as fiction.

"Hugh Wynne, Free Quaker," 1897, appeared first as a serial in the Century Magazine. Nearly everyone in the office of the publisher read the unbound sheets of the novel because of its extreme interest. It was decided to withhold publishing this book until it ran as a serial in the magazine. The story ranks among the great historical novels and treats of Colonial life in Philadelphia during the Revolution. A Quaker depicts the war and his right to defend his country. Dr. Mitchell spent seven years in the preparation of this book.

"The Adventures of Francois," 1898, is a romance of the French Revolution. It gives a good description of Paris during that epoch. It was Dr. Mitchell's favorite novel. In his own words, "one of my novels that can be labeled picturesque."

"Dr. North and His Friends," 1900, is a character study. Many facts and scientific observations known to medical men are here presented under the cloak of fiction. There is charm and culture in the leading character. Into the plot is woven a great deal of wit and wisdom.

"The Autobiography of a Quack and Other Stories," 1900, is an analysis of a charlatan and is of interest particularly to medical readers. "Circumstance," 1901, is a very unsympathetic story of a Philadelphia family. "Youth of Washington," 1904, is a faithful and authentic account of the life of George Washington in which the charm of his personality is vividly portrayed.

"Constance Trescot," 1905, deals with the reconstruction period and conditions in the South after the Civil War. It is a good study of a pathological mood and is considered one of Dr. Mitchell's best constructed novels. There is a professional trend throughout the book. It is constructed along psychological lines—behaviorism and mental torture play a part in the tragedy. The feeling between the North and South, its effects on the hatred created during the war, and the revenge of a woman against the man who murdered her husband, by means of mental torture causing him to commit suicide, is well described.

"The Red City," 1908, which has all the charms of old letters and diaries, gives an accurate description of early Philadelphia, her people, streets, and houses; it also contains an account of the epidemic of yellow fever in 1793. "Westways," 1913, contains a description of the Battle of Gettysburg and gives accurate results of the effects of the Civil War on Pennsylvania. This was Dr. Mitchell's last novel and was published during his eighty-fourth year. It displays some of the antagonism between the North and South before the war.

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

The State Meeting at Colorado Springs

Plans are completed for virtually every minute detail of the Sixty-third Annual Session. Every member of the Society who can possibly go to Colorado Springs, even if but for one day of the meeting, should do so. This has been a most trying year; from his practice, his poor collections, his worries and his day-by-day surroundings every doctor needs a vacation. Likewise he needs the scientific stimulus and the professional fraternalism that the year's big meeting provides.

The Scientific Program was published in the last month's issue of Colorado Medicine. Appended here are a few additional announcements concerning the new low hotel rates, the exhibits, etc. Read these, and read the program in the August issue again. There may be those who will say they cannot afford to make the trip. But how can they answer the question, "How can you afford to stay away?"

HOTEL RATES

Hotels in Colorado Springs promise the lowest rates in years for our Society's 1933 Annual Session. Several of the hotels have placed letters on file with the Executive Office of the Society announcing rates for the meeting. Rates for those hotels which have filed letters up to the time of going to press are quoted below. Members may feel assured that these rates will not be exceeded. They are given in the order letters were received by the Executive Office.

Antlers Hotel (Headquarters hotel): Single room with bath, occupied by one person, \$3.00 per day; double room with bath, twin beds, two persons, \$5.00 per day.

Acacia Hotel: Single rooms, without private bath, \$1.50 and \$2.00; double rooms, without private bath, \$2.50 and \$3.00; single rooms, with private bath, \$2.50 and \$3.00; double rooms, with private bath, \$4.00 and \$5.00.

Joyce Hotel: Single room without bath, \$1.50 to \$2.50; double room without bath, \$2.50 to \$3.50; single room with bath, \$2.50 to \$3.50; double room with bath, \$3.50 to \$5.00; twin beds room without bath, \$3.00 to \$4.00; twin beds room with bath, \$4.00 to \$5.00.

Alamo Hotel: Single room without bath, \$1.00

and \$1.50; double room without bath, \$2.00 and \$2.50; single room with bath, \$1.50, \$2.00, and \$2.50; double room with bath, \$3.00, \$3.50, and \$4.00.

Rates of all the above-mentioned hotels are on the European plan.

Members are advised to obtain their reservations direct with the hotel of their choice.

SPECIAL EXHIBIT-CLINIC

An exhibit and clinic on oral surgery, demonstrated with two hundred and fifty wax models, will be conducted Saturday morning, September 16, by Wilton W. Cogswell, D.D.S., on the stage of the Municipal Auditorium arena.

The clinic is composed of models of practical cases showing the various steps of procedure for surgical removal of teeth and surgical correction of various pathological conditions and anatomic abnormalities of the mouth. All models are free-hand carvings, their preparation requiring eight years. They were built for purposes of post-graduate instruction in dental oral surgery and for photographing to illustrate Dr. Cogswell's textbook. They have been presented at approximately fifty national, district, and state dental meetings in the United States and Canada.

Dr. Cogswell's clinic will open promptly at 10:30 a. m. Saturday, September 16, and will be presented only once during the Annual Session.

GENERAL SCIENTIFIC EXHIBITS

The following are listed in the order of their receipt by the Committee:

Internal Fixation of Fractures.—Drs. R. G. Packard and H. I. Barnard, Denver.

Association-motor Investigation of the Psychoneuroses.—Department of Neuropathology, Colorado Psychopathic Hospital, Denver.

Brain Tumors.—The Colorado Psychopathic Hospital, Denver.

National Formulary Preparations; Prescription Vehicles.—The Colorado Pharmacal Association.

Serial Electrocardiograms in Cases of Recovery from Attacks of Coronary Thrombosis (See paper on Scientific Program).—Maurice Katzman, M.D., Denver.

Some Studies on Hair Growth.—Richard W. Whitehead, M.D., University of Colorado School of Medicine, Denver.

Unusual Manifestations of a Testicular Neoplasm.—The Rio Grande Hospital, Salida.

The Avoidance of Pulmonary Complications from Intravenous Arsenicals (See paper on Scientific Program).—George C. Shivers, M.D., Colorado Springs.

Surgical Wax Model Clinic.—Wilton W. Cogswell, D.D.S., Colorado Springs.

Fracture Table, New Model.—George W. Hawley, M.D., Bridgeport, Conn.

Title Not Announced.—Beth-El General Hospital, Colorado Springs.

Title Not Announced.—Colorado Tuberculosis Association.

BOARD OF MEDICAL EXAMINERS

The Colorado State Board of Medical Examiners, at its last meeting held July 11, elected Dr. Gerald B. Webb of Colorado Springs as its president for the coming year. Dr. E. B. Swerdfeger was elected vice president and Dr. William Whitridge Williams was re-elected secretary-treasurer. Dr. Nolie Mumey, a new member of the board, was appointed to the chair of surgery. He announced the introduction of a new type of examination, whereby applicants will be given lists of true and false statements, complete and incomplete sentences, this form to replace the old question-and-answer type of examination. The next regular meeting of the Board will be held early in October.

MEDICAL SOCIETIES

ARKANSAS VALLEY MEDICAL ASSOCIATION

The mid-summer meeting of the Arkansas Valley Medical Association was held at the Elks Club in Salida, August 12.

Dr. O. D. Groshart, president, called the meeting to order.

Dr. Charles E. Eimer of St. Louis, Mo., and Dr. George W. Hawley of Bridgeport, Conn., were the invited guests at the meeting. Dr. Eimer spoke on "Acute Otitis Media," and Dr. Hawley on "Some of the Common Signs of Common Injuries."

Other papers on the program were "Asphyxia Neonatorum" by Dr. John D. Geissinger of Pueblo; "Compression Fractures of the Spine," by Dr. J. Sims Norman of Pueblo; "Motion Picture of Transurethral Resection of the Prostate Under Spinal Anesthesia," by Drs. Harold T. Low and L. L. Ward of Pueblo, and "Paroxysmal Tachycardia," by Dr. Leo W. Bortree of Colorado Springs. Dr. Bortree was unable to attend the meeting due to absence from the state and Dr. T. R. Knowles read the paper.

After the scientific session, a barbecue supper was held at Round-Up Lodge and dancing was enjoyed later in the evening at Mt. Princeton Hotel.

The following officers of the Arkansas Valley Medical Association were elected for the ensuing year: President, Dr. R. E. Holmes, Canon City; Vice President, Dr. C. Rex Fuller, Salida; Secretary, Dr. Kon Wyatt, Canon City.

* * *

LARIMER COUNTY

The Larimer County Medical Society held its regular monthly meeting August 2. Dinner preceded the meeting and was served at the Green Wings Restaurant. The scientific meeting was held at the Bacteriology laboratory at the college.

Dr. L. F. Daniels of Denver was the guest speaker of the evening.

The following rules relative to advertising by members of the Larimer County Medical Society were adopted, as formulated by the committee appointed at the June, 1933, meeting.

A physician coming to Larimer County may announce his locating by a card in the local papers for a period not to exceed six months from the time of registration of license. The card to be limited to name, specialty, if any, location of office, office hours and telephone number. An announcement of locating may be sent to members of the profession only.

Change of location of office will permit of a notice in local papers for a period of one month, announcing change.

Removal to another part of the country will permit a notice in local papers in new location, for a period not exceeding six months.

A physician upon being absent from the county for a period of one year or more, will be allowed to insert his card in the local papers for a period not to exceed three months from the time of his return to practice in the county.

Upon the establishment of a partnership, or combination of physicians, for the practice of medicine or surgery, or the dissolving of the same, a card may be placed in the local papers announcing the fact, for a period not to exceed one month. A notice of the same may be sent to members of the profession, if desired.

Committee: C. H. Platz and T. C. Taylor.

DUANE F. HARTSHORN,

Secretary.

* * *

NORTHWESTERN COLORADO

Dr. Philip Hillkowitz of Denver was the guest speaker at the regular meeting of the Northwestern Colorado Medical Society held July 29. The scientific meeting was held in the Commissioners Room at the Court House and was preceded by a dinner served at the Progressive Cafe.

DUANE TURNER,

Secretary.

* * *

GOVERNMENT SERVICES

Memorial to Colonel Bruns

A portrait of the late Col. Earl H. Bruns, U. S. Army Medical Corps, will be placed in an army tuberculosis hospital as a memorial, according to a recent announcement. Colonel Bruns, who died

early this year, was for many years one of the leaders in tuberculosis work in the army. It is expected that the portrait will hang in some room or building to be named in his honor. Subscriptions for the memorial should be mailed to the secretary of the Denver Sanatorium Association, Dr. Arnold Minnig, Republic Building, Denver.

WOMAN'S AUXILIARY

The annual state meeting to be held in Colorado Springs this month, September 14 to 16, should be well attended by wives of the medical men. Each year, has seen an increase in interest, and this year, hope of the depression waning should cause new enthusiasm. An annual meeting always brings regrets, of course. We bid good-bye to a coterie of efficient officers, but there is the welcoming of new ones to carry on work well started.

Mrs. Blake's article which appeared in the June issue of the A. M. A. Bulletin has such inspiration in it that excerpts are reprinted here because of the thoughts that are particularly apropos at this time as we end one year and start another:

"We all realize the Auxiliary to the American Medical Association is such a far flung line; all sections of our country and so many and such varied interests are represented that coming in contact with one another is, in itself, an education. I sometimes wonder if we fully realize how much this may mean for the future. It is just as important to keep our sectional individuality as it is important to maintain our sense of unity as a state and nation-wide organization.

"No other group in its national life has a wider opportunity for helping to promote and develop this unity in diversity. Our contacts are varied, our insight should be keener and our sympathies broader because of the great purpose we serve. It would be interesting to call the roll of members of the Auxiliary and have pictured before us the differences represented. As the film passes, we see women graduates of our finest colleges and universities, women trained in the liberal arts and in vocations, lawyers, doctors, nurses, business women and social workers, and leading all the rest, the home makers, all by marriage interested in their husband's profession. What an army of potential force is here. Nothing is impossible to such a power. It is this potential power of the highest interpretation that gives inspiration to the work itself.

"The Auxiliary has accomplished a great deal since it became a national organization—an accomplishment on which every member must look with pride. But looking backward is not our slogan. What has been done is valuable chiefly as a spur to what we may do, or do all the better because of the experience gained. The organization has an unlimited field today. How far that field should be cultivated is a question demanding the thoughtful consideration of every state. A chain is as strong as its weakest link. Getting together has proved to be one of the most practical ways of solving difficulties. It affords the opportunity to see things from numerous angles, to clear up, by good tempered discussion, differences that are often more apparent than real. It helps to a better understanding, and it encourages open-mindedness in dealing with prob-

lems, and how splendid it is to find a willingness to sink individual differences in view of the greater good of the whole . . .

"There is a sort of a challenge in the air these days, but I know our auxiliary women will live up to the challenge. A real auxiliary member is one who can take and grow and give, one who can sense her responsibility to a group and also to each individual in it. The ideal auxiliary woman must at times be a sponge, interested only in absorbing; again, she must be a brilliant prism receiving benefits from others and reflecting them back."

This applies as much to each member of county and state as it does to the members of the national organization. Each one of us can find inspiration from our county, state, and national officers—all working for the good of the auxiliary.

MRS. DOUGLAS W. MACOMBER,
State Chairman of Press and Publicity.

WAR DEPARTMENT

Headquarters Seventh Corps Area, Office of the Surgeon

Baird Building, Omaha, Nebraska

The medico-military course of inactive duty training for Medical Department Reserve officers, which has been held at the Mayo Clinic during the past four years, will again be held this year from October 1 to 14, both dates, inclusive. This inactive duty training will follow the plan so well worked out under the auspices of Colonel George A. Skinner and the military features will be under his personal supervision.

This type of military medical training is now well established and has proved its worth during the past four years. The course offers valuable and interesting training for the Medical Department officers of all the components of our national defense. The staff and faculty of the Mayo Clinic have again placed their unexcelled facilities at the service of their government in the interest of preparedness, and have extended an invitation to all the services to participate.

This short course is equally applicable to general practitioners and specialists. The morning hours are devoted to purely professional subjects selected by the student officers. The afternoon hours pertain solely to medico-military subjects and the evening hours are covered in a lyceum course of general interest.

Application for this course of inactive duty training should be made to the Corps Area Surgeon, Seventh Corps Area, Omaha, Nebraska. Applications should state the character of the work the candidate desire to follow in the morning hours. All student officers are expected to attend and participate in the afternoon and evening sessions. Each applicant should fully understand that the invitation to accept this course of study without charge is extended by the Mayo Clinic; that the project is without expense to the Government; and that one hundred hours' credit will be given those who take and complete the course. While it is desirable to attend the entire course, those whose time will not permit this may join or leave at any time and will receive credit for the hours spent in training. Uniforms are optional.

Colorado State Medical Society

Officers, 1932-1933

President: Frank B. Stephenson, Denver.

President-elect: Gerald B. Webb, Colorado Springs.

Vice Presidents: First, Walter W. King, Denver; Second, Lawrence L. Hick, Delta; Third, B. Franklin Blotz, Rocky Ford; Fourth, William P. Gasser, Loveland.

Constitutional Secretary: Lorenz W. Frank, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone KEystone 0870.

Delegates to American Medical Association: Senior, Crum Epler, Pueblo; Alternate, J. N. Hall, Denver; Junior, John W. Amesse, Denver; Alternate, A. J. Markley, Denver.

Councillors:

Term Expires

District No. 1	Ella A. Mead, Greeley	1935
District No. 2	G. P. Lingenfelter, Denver	1934
District No. 3	George D. Andrews, Walsenburg	
(Chairman)		1933
District No. 4	W. W. Crook, Glenwood Springs	1936
District No. 5	A. L. Burnett, Durango	1937

Standing Committees, 1932-1933

Credentials: Lorenz W. Frank, Denver, Chairman; W. A. Campbell, Colorado Springs; Harold T. Low, Pueblo.

Scientific Work: G. Burton Gilbert, Colorado Springs, Chairman; C. S. Bluemel, Denver; James J. Waring, Denver.

Sub-committee on General Scientific Exhibits: C. E. Harris, Woodmen, Chairman; F. M. Heller, Pueblo; Maurice Katzman, Denver.

Sub-committee on Roentgenological Exhibits: W. F. Drea, Colorado Springs, Chairman; K. D. A. Allen, Denver; L. G. Crosby, Denver.

Arrangements: John B. Crouch, Colorado Springs, Chairman; T. R. Knowles, Colorado Springs; John B. Hartwell, Colorado Springs.

Public Policy: Walter W. King, Denver, Chairman; H. R. McKeen, Denver, Vice Chairman; Edward Delehanty, Denver; Gerrit Heusinkveld, Denver; A. L. Beaghtler, Denver; W. W. Harmer, Greeley; O. D. Groshart, La Junta; L. L. Ward, Pueblo; A. C. Holland, Colorado Springs; F. B. Stephenson, Denver, ex-officio; L. W. Frank, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

Publication: C. F. Kemper, Denver, Chairman; C. S. Bluemel, Denver; William H. Crisp, Denver.

Medical Defense: W. W. Wasson, Denver, Chairman; C. F. Hegner, Denver; T. D. Cunningham, Denver.

Medical Education and Hospitals: C. N. Meader, Denver, Chairman; K. D. A. Allen, Denver; H. A. Black, Pueblo.

Library and Medical Literature: E. D. Downing, Woodmen, Chairman; F. W. Kenney, Denver.

Co-operation With Allied Professions: Harry S. Finney, Denver, Chairman; George R. Warner, Denver; John Andrew, Longmont.

Medical Economics: C. E. Cooper, Denver, Chairman; C. F. Kemper, Denver; Philip Hillkowitz, Denver.

Necrology: G. M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; Lee Bast, Delta.

Special Committees, 1932-1933

Postgraduate Clinics: Maurice H. Rees, Denver, Chairman; O. M. Gilbert, Boulder; C. E. Harris, Woodmen; Nolie Mumey, Denver; G. E. Cheley, Denver.

Workmen's Compensation Affairs: A. S. Cecchini, Denver, Chairman; L. G. Crosby, Denver; W. R. Waggener, Denver; J. D. Carey, Fort Collins; Lanning E. Likes, Lamar; D. H. O'Rourke, Denver; John Andrew, Longmont.

Veterans' Legislation: J. W. Amesse, Denver, Chairman; E. B. Liddle, Colorado Springs; Crum Epler, Pueblo; L. H. Winemiller, Denver; Louis V. Sams, Denver.

Advisory to the School of Medicine: John S. Bouslog, Denver, Chairman; N. A. Madler, Greeley; C. O. Giese, Colorado Springs; C. E. Sidwell, Longmont; T. D. Cunningham, Denver.

State Registration Fee: R. W. Arndt, Denver, Chairman; Frank E. Rogers, Denver; T. E. Beyer, Denver.

Constituent Societies

Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Cryslar, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, C. Rex Fuller, Salida.

Crowley County—Second Wednesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, R. B. Porter, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, G. M. Noonan, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—Third Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Thursday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

President, F. L. Beck, Cheyenne Vice President, J. L. Wicks, Evanston
President-elect, H. L. Harvey, Casper
Secretary, Earl Whedon, Sheridan Treasurer, Evald Olson, Meeteetse
Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne
Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas
Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:
EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

The Pupillary Sign of Death

TO A GREAT many people the fear of burial before death is often present in their minds, and the doctor is often asked soon after death this question: Are you sure he is dead, Doctor? Of course there are many signs of death, but one of the most simple is that which the eye offers. It is such a simple test that it ought to be used first. It requires no special instruments or preparations. All that you need do is to separate the lids, and by making pressure on the eye ball watch for a change in shape of the pupil under this pressure. In a living person the pupil will still retain its shape, but if death has occurred the pupil will take different shapes depending on just what pressure is made on the eye. For instance, if a finger is applied to each side of the eye ball the pupil will become ovular perpendicularly. If three points of pressure are applied to the pupil after death, it takes on a triangular shape.

During life these changes do not occur and for a simple and rapid test we know of no sign more easily made or more sure in its findings.

E. W.

The Colorado Springs Meeting

THE Sixty-third annual session of the Colorado State Medical Society will be held in Colorado Springs September 14, 15, and 16. That this will be a most interesting and valuable meeting we all know, and it offers the men of central and southern Wyoming a fine chance to attend and be-

come better acquainted with the gifted members of the Colorado medical profession.

The fact that Wyoming had to give up its annual meeting this year on account of the late abandonment of the Yellowstone Park meeting, leaves the Wyoming men without a chance to get together, but Colorado offers this opportunity. It's true we can't all go, but that is all the more reason that those who can should be there.

The Editor has attended several of the Colorado meetings and he regrets very much that he cannot attend, as he must, as Secretary, attend the annual meeting at the A. M. A. at Chicago, September 22 and 23, of the Editors and Secretaries of the different State Societies.

We do know that every Wyoming doctor who does attend the Colorado meeting will come back well repaid for the trip. Then, too, the Colorado doctors are a fine bunch of fellows and we love to meet with them. Make your plans to run down to Colorado Springs and register from old Wyoming and see what a fine time you will have. You will be a better doctor after attending this meeting. It would be worth the trip to hear the banquet speaker, Dr. Olin West, secretary and general manager of the American Medical Association. E. W.

WYOMING NEWS NOTES

CASPER

Dr. J. C. Kamp has been compelled to take a rest in California on account of his health. Word received from him indicates improvement, and he hopes to be back in Casper soon.

Splendid Laws for Disease Prevention Are Enacted in Newark

Following example set by New York, Newark, New Jersey, in 1920 enacted a health ordinance providing for the examination of all food carriers and the exclusion from these trades of all found suffering from communicable disease. The findings of these examinations during eleven years caused the law to be widened to include domestic employees in 1930. It requires all domestic employees to file with the Department of Health a certificate from a duly licensed physician setting forth that such persons are free from tuberculosis and any other contagious or communicable disease. This certificate must be renewed every six months. Provision is also made for free examination. The penalty for failure to comply is a fine of \$25 for the first offense and \$50 for the second. Both the domestic and the employer are liable under the law for any violation of the ordinance.

Domestics with arrested tuberculosis or with venereal disease in a non-communicable form are allowed to continue in their occupation. The department follows up all applicants who have been found infected, to see that proper treatment is being carried out. By the city ordinance the nature of the disease can not be divulged to the employer. This is better for the self-respect of the domestic and insures greater effort in bringing about proper and continuous treatment. The law acts as a bar to the employment of the sick and diseased, who would compete by accepting lower wages and longer hours.

This is fine for the protection of the home, but how about protecting healthy workers against contagious diseases of employers and their families?—Taken from an article by Dr. Charles V. Craster in *American Journal of Public Health*, May, 1933.

THE 1933 GRADUATE FORTNIGHT of the NEW YORK ACADEMY OF MEDICINE

Metabolic Disorders will be the theme of the 1933 Graduate Fortnight of the New York Academy of Medicine. Two weeks of intensive study, from October 23 to November 3 inclusive, will be devoted to this important branch of medical science. The theoretical, physiologic and pathologic phases of metabolism, as well as of certain of the associated endocrinologic problems, will be treated in a series of round table discussions and clinical demonstrations. The latter will be given in fifteen of the leading hospitals of New York City.

An exhibit will be shown in connection with the Fortnight, material having been collected from many institutions in Metropolitan New York. The various aspects of metabolic disorders will be covered in this exhibition, including the history of metabolism; dietary constituents and their derivatives; drug and other therapeutic measures; general and special pathological metabolism; and laboratory methods and procedures. The subjects will be illustrated by means of charts, graphs, photographs, microphotographs, transparencies, x-rays, gross and pathologic specimens.

The profession of the country is invited to participate in the Graduate Fortnight. A complete program and registration blank may be secured by addressing Dr. Frederick P. Reynolds, The New York Academy of Medicine, 2 East 103rd street, New York City.

AMERICAN CONGRESS OF RADIOLOGY

Chicago during the World's Fair will welcome the largest radiological congress ever held in the United States when the four national radiological societies will meet here in joint convention. Other members of the medical profession are invited as well. The American Congress of Radiology is scheduled for September 25-30, inclusive at the Palmer House. According to Dr. Henry K. Pancoast of Philadelphia, president of the Congress, all physicians, physicists, biologists and others connected with the Allied sciences will be made welcome at the Congress.

The four radiological societies sponsoring the Congress who have eliminated their regular annual meetings for 1933 in its favor are: The American College of Radiology, the American Radium Society, the American Roentgen Ray Society, and the Radiological Society of North America. The Chicago Roentgen Society will also participate.

Scores of visitors from Central and South American countries are expected to attend the Congress, and invitations have been set to European colleagues. Over 150 essayists will devote fifty-five full hours to the scientific program. The six-day program, however, places the scientific meetings to terminate at 2:00 p. m., leaving the afternoons free for visiting the Century of Progress World's Fair. Incidentally, the Fair itself will have remarkable worthwhile displays showing the development of the x-rays and radium in their medical applications.

Cinchophen, when called Atophan, costs 643 per cent more.

WHY IS THE DOCTOR THE LAST ONE PAID?

The general public is quick to take advantage of conditions. During good times people overbought. Because their next door neighbor purchased a new radio or automobile, so did they. Then the saturation point was reached. The public had purchased far beyond their income, and owed its salary for years to come. Buying stopped. The retailer, wholesaler, and manufacturer was overstocked, and was forced to cut. People became unemployed. Then because the next door neighbor had his income cut or lost his job, he started to cry "I can't pay," and his neighbor took up the cry. Along came the moratorium—"cancel my bill or give me more time," the neighbor cries, "I can't pay." Then the other neighbor who can pay won't pay, because his mental attitude has been warped by those who really couldn't pay. The creditor got the idea that because John Jones couldn't pay, neither could Bill Smith—SO—Mr. Creditor says, "What is the use of going after my accounts, people can't pay." After a while, Bill Smith, who is able to pay, really believes he can't, and holds out. NOW—Why is there more money on deposit in both postal and savings banks, and more hoarding than ever before? Everybody wants two for one. If a person is supposed to pay \$10.00 a month on an account, he only wants to pay \$5.00. If he owes a \$50.00 bill, he only wants to pay \$25.00; but when Mr. Creditor says, "no discount" and means "no," and forces Mr. Debtor to pay, Mr. Debtor goes out and digs up the full amount—which all goes to prove that IF YOU WANT YOUR OUTSTANDING MONEY, YOU WILL HAVE TO GO AFTER IT—IT WILL NOT COME TO YOU.

The National Recovery Act within a short time will again change public opinion. Johnson says "Sign NRA voluntarily;" but un-

derneath he means, if you don't he will do it for you. Apply this idea to your accounts and it will bring in money you now consider uncollectible. The NRA is already bearing fruit, and changing your opinion toward your outstanding accounts will also bear fruit for you.

To maintain a high percentage of collection results, constant contact must be maintained with your debtors. This is not accomplished by sending a statement. Neglect and failure to obtain the full name of a patient, or the responsible party—the wife's or husband's name or names of relatives—correct address—occupation—employer; also extending credit to those in poor credit standing, will lessen your percentage. If you cannot find time to make contact, or find the debtor has moved or is stalling, turn such accounts to THE AMERICAN MEDICAL AND DENTAL ASSOCIATION, INC., at once. We will not lose your patient through unethical collection methods, but we WILL collect your money. Your chance of losing your patient is greater when he owes you, because his pride will make him go to someone else.

Use us as personal Credit Manager. When we are sick we come to you. When a patient won't pay, you come to us. We both know our business. Time is the most important element in collections. Don't let your accounts become old, or you will be unable to locate your debtors, or they will dispute and find excuses for non-payment, which hinders collection, also. The earlier you turn in your accounts, the less commission you pay, and greater your results.

We collect a greater average for the doctor than any other company. Make us prove it. Turn in your accounts now. A 'phone call, or a postal card will bring a representative to your office.

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Colorado Hospital Association

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J. E. SWANGER Modern Woodmen of America Sanatorium Woodmen, Colorado	GUY M. HANNER Beth-El Hospital Colorado Springs, Colo.	G. WALTER HOLDEN, M.D. Denver, Colorado	MAURICE H. REES, M.D. Univ. of Colo. School of Medicine and Hospitals Denver, Colorado.	ROBERT B. WITHAM Children's Hospital Denver, Colorado
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Coming Meetings:

- American Protestant Hospital Association—Milwaukee, September 8-11.
- American Hospital Association — Milwaukee, September 11-15.
- American College of Surgeons—Chicago, October 9-12.
- American Dietetic Association—Chicago, October 9-12.
- Colorado Hospital Association—Cosmopolitan Hotel, Denver, November 15-16.

* * *

New Members for the Colorado Hospital Association

THE Colorado Hospital Association needs new members to fill the ranks of those who have left the hospital field in the State. Each member of the Association can assist the Membership Committee by suggesting to the hospital administrators of his community who are not members of the Association that they should join at once.

This is an especially opportune time for every hospital to become a member of the State Association, because the Association group is in touch with the National Hospital Association in regard to the National Recovery Code program and its effects upon the hospitals of the country. Hospitals that are not members of the Association are having to depend upon those who are members to keep them informed in this matter. By joining the Association, a hospital will not only gain the benefit of knowing what the concerted action is on the National Recovery Code, but he will have an opportunity to contribute his part toward the working out of the problems created by the depression and the recovery. These facts should be called to the attention of non-members seeking information from members of the Association.

The National Recovery Code

THE Committee of the American Hospital Association representing the hospital group met with members of the Recovery Administration staff in Washington, on Thursday, August 17, and secured a ruling which exempted the hospitals coming under the purview of the National Recovery Act. The ruling, however, stated that there was nothing to prevent any employer or organization, even though entitled to exemption, from signing the President's Re-employment Agreement and conforming to its provisions.

Any hospital which does sign the Code must abide by its requirements. The following is quoted from the report of the Joint Committee Representing the Hospitals Before the National Recovery Administration: "Any hospital which contemplates the signing of the President's Re-employment Agreement would be well advised to take the matter up with its local hospital council or state hospital association and obtain a consensus of local hospital opinion regarding the effect of such an action upon other local hospitals. No action should be taken which is contrary to the legitimate interests of the hospitals of the community or that would embarrass them in their customary public relations."



THE AMERICAN HOSPITAL ASSOCIATION ANNUAL MEETING

The annual meeting of the American Hospital Association will be held in Milwaukee, Wisconsin, September 11 to 15. The headquarters of the convention will be at the Hotel Schroeder. Exhibits and scientific sessions will take place at the Municipal Auditorium. The Protestant group will hold its meeting at the Hotel Pfister.

The American Hospital Association meeting will be one of the most important ever held by the Association. The new Recovery Code will be thoroughly discussed, and the group will decide whether or not the hospitals should draw up their own code. The entire program will be of its

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NICHOLAS ALLEN MADLER
President-elect, The Colorado State Medical Society

EDITORIAL NOTES AND COMMENT

N. A. Madler

DR. NICHOLAS ALLEN MADLER was born November 27th, 1881, on a farm near Appleton, Wisconsin. He was one of twelve children. He attended the local county school until he reached the age of thirteen years, at which time, after the death of his father, the family moved into the city of Appleton, where Dr. Madler attended high school. He entered Rush Medical College in the fall of 1900 and graduated in 1904. He then served fifteen months' internship in St. Mary's Hospital, Milwaukee. Whether wanderlust then gripped him or whether he was dissatisfied with his native climate, he immediately repaired to a southernly located city, Mobile, Alabama, and engaged in practice from 1905 until 1917. He came to Colorado in July, 1917, and after one year spent in recuperating his health, which had been impaired while he was in the south, located in Greeley (1918), where he has since practiced steadily.

He is a Fellow of the American Medical Association and a Fellow of the American College of Surgeons.

Dr. Madler was not long in identifying himself with Colorado State Medical Society activities. He was a rather constant attendant at the annual sessions, and made himself felt through his discussions and his good advice. He has been particularly active in his own county as one of the prime movers in the establishment of a standardized hospital in the city of Greeley, a county owned and county controlled institution. The fight of five years ago to accomplish this standardization and in which Dr. Madler was very active as chief of staff of the hospital, is of historical importance. It involved the exclusion of cults and consequently the institution of law suits by osteopaths against the hospital which were won by the hospital in both District and State Supreme Courts. At the present time, this hospital is pointed to over the United States as a successful example of a combined indigent and pay institution in which the pro-

fession is remunerated for its care of the poor.

In 1906, Dr. Madler married Miss Harriet Wier Bethea of Mobile. Dr. and Mrs. Madler have a married daughter and two grandsons, one four and one-half years and the other six months old. These grandchildren, we understand, are Dr. Madler's principal hobby. A second hobby is gardening. It is known to his friends that he gives almost his whole time to professional work and study and that his recreation hours are few, but there is a rumor that detective stories are not barred from his library.

The choice by the House of Delegates of a man of Dr. Madler's age, determination, judgment, sympathy, outlook on medical problems, organization interests, attainments in practice and general likability is especially happy at this time. The profession's interests are now unusually demanding of activity and tempered thought on the part of its executive officer, and Dr. Madler's natural endowments in those respects are bolstered by the experience he has had in important committee work for the Society.

We shall look forward to a sympathetic and understanding administration by Dr. Madler.



Dr. J. N. Hall Feted After Fifty Years in Colorado

THE banquet hall at Denver's Cosmopolitan Hotel, scintillating in its proudest adornment, contained a most dignified group of some two hundred fifty persons on September 19. They were the friends of Dr. J. N. Hall, assembled to do him honor after his half century in Colorado as a distinguished physician. President Cooper, of the Denver County Society, introduced Toastmaster Robert Levy. Dr. Levy was soon struggling for friendly terms with a most unfriendly microphone. Diplomacy and a gentle voice were without avail—the thing was bound to mimic him. It seemed to be the greater of two evils. But, after all, it

augmented his prowess as a clever "Roast-master."

To eulogize Dr. Hall in his presence, and with many more active years ahead, placed several speakers at a disadvantage—their victim stalking them, ably as ever. The affair was anything but a postmortem; everyone, except Dr. Freeman, admitted he was glad it wasn't.

The first speaker was a more worldly sort—statesman, leader of men, maker of presidents. He and Dr. Hall, however, are both great story tellers; that is, their veracity may be questioned to approximately the same degree. Perhaps this was the opportunity, anticipated for thirty years, wherein he might avenge Dr. Hall for having introduced him so long ago as a man known among farmers as a doctor—and among doctors as a farmer. Or perhaps Hubert Work changed his mind in reverence of the things which Dr. Hall might say, should he yet speak. Suffice it, then, to praise him. J. N. Hall was a man destined to distinguish himself in some field, if not in medicine. He has been little damaged by time and is still an institution among us.

Followed then a speaker of a more dramatic career—dramatic as surgery may be so termed. He knows Dr. Hall perhaps more thoroughly than any other male member of the clan. They go fishing together. So Dr. Freeman used up his time lauding Mrs. Hall. How or why she had the courage to roll up her sleeves and take a chance on Hall seems to worry Leonard Freeman. But he concedes that she has done her work well. She molded him as she was able, and he became a man's man. A skillful woman, indeed. Finding out what a terrible liar she had married, she molded that quality into an asset, and Hall's stories have always therefore been good and agreeable—says Dr. Freeman. Looking for more worlds for him to conquer, Mrs. Hall moved him from Sterling to Denver, letting him think, of course, that it was of his own free will. And so his practice grew and he became a consultant, his reputation national, and he was unique.

A younger man then spoke, a man who has known Dr. Hall intimately for probably not over thirty years. During the early years

of that friendship, Dr. Amessee was in Cuba, drawing a frequent check from Uncle Sam. Looking eagerly toward the realm of Dr. Hall, John Amessee longed to conquer the art of medicine under its master. So he sent Cuban cigars, which were good. Dr. Freeman never before had called on Hall so frequently. Then Amessee sent a walking stick, but Dr. Hall doesn't use a stick. Next came a Panama hat, but it was three sizes too small. Finally, Dr. Amessee brought himself along and usurped a place in Dr. Hall's office, washing bottles. Somebody had to wash the specimen bottles. But he was at the feet of a master, an indefatigable worker. To justify his privilege, he had to write papers and talk to his colleagues. He learned never to underestimate his fellow men. And today, of Dr. Hall's many talents, Dr. Amessee officially places his order to inherit his greatest three—versatility, judgment, and humanity.

Finally, a splendid portrait of Dr. J. N. Hall by Waldo Love was unveiled and accepted for the Denver County Medical Society by the Chairman of the Board of Trustees, Dr. G. M. Blickensderfer. It will be a valued possession of the Medical Library for all time, a gift from the friends of Dr. Hall.



Honors to Colorado Men.

DR. JAMES J. WARING of Denver is the newly elected Vice President of the Western Branch, American Public Health Association. He is also a member of the Board of Directors and Executive Committee of the National Tuberculosis Association.

Another Colorado man was signally honored in receiving, a few months ago, the Ling Medal for outstanding service in the field of child health and welfare. This was accorded Dr. A. L. Beaghler by Dr. Sven Lokranz, Trustee for the Ling Foundation, Inc., at the Pasadena meeting of the Western Branch. This honor was a complete surprise to Dr. Beaghler and was awarded as he modestly retired from the presidency

of this division of the American Public Health Association.

Dr. William C. Finnoff of Denver was elected to the chairmanship of the Section on Ophthalmology at the last annual meeting of the American Medical Association.



Third International Goiter Conference to Come to America.

THE American Association of the Study of Goiter, at its annual conference at Memphis last May, elected Dr. S. D. Van Meter of Denver its first life member. Such resolution was made in recognition of Dr. Van Meter's unceasing work since the organization's inception. He was its presiding officer for one year and on its Council for several years. Further recognition was tendered him as Vice President of the International Conference on Goiter at its meeting in Berne in 1927. His institution of the prize award for the best essay on original goiter research work has attracted manuscripts from America, continental Europe, India, Australia, New Zealand, and Mexico. Dr. M. O. Shivers of Colorado Springs was a member of the Resolution Committee at the Memphis Session. Dr. Frank Rogers of Denver, a member of the Executive Council of the American Association for the Study of Goiter, was appointed a member of the American delegation to represent the Rocky Mountain region at the Second International Conference in Switzerland.

Dr. Van Meter was chosen chairman of the Invitation Committee to deliver America's invitation for the Third International Goiter Conference to the Second Conference at Berne in August of this year. The invitation also included the Dominion of Canada. Unfortunately, ill health prevented his attendance. A diligent committee, however, assured the conference of the hearty cooperation of the entire medical profession of America.

At the conference, which was a complete success, our invitation was enthusiastically accepted—with the acknowledgement that the acceptance resulted from Dr. Van Meter's efforts to procure it for America in 1937.

The 1934 American Medical Directory

A NEW edition of this important volume is being compiled for publication next spring. Practically every County Medical Society has a small list of delinquent members, or a few dropped for non-payment of dues, and a number of new physicians in all localities have delayed joining. The majority of physicians desire to be listed as members of their State Society and the A. M. A. with the proper symbol. An important reason is that most industrial organizations, insurance companies, and railroads consult the Directory before making their appointments.

Readers will please be mindful of the importance of this announcement. Through their loyalty to organized medicine, we urge them to stay within the fold and to remind delinquent men or new physicians that the directory is now being compiled. It will be at least 1936 before another is prepared.

The data cards sent all physicians by the A. M. A. should be filled out and returned at once. Those who are not now members in good standing should attend to the matter within the next month to assure their listing as members.



The Sixty-Third Annual Session

OUR highest expectations were answered in full. Attendance was good, despite the fact that fear of washed out roads undoubtedly inhibited the migration from the north and, to a lesser degree, from the west. Registration was about four hundred fifty; banquet seats numbered approximately half this figure.

The first important business transacted by the House of Delegates was the passage of an amendment increasing the number of Councillor Districts from five to nine. Such will reduce the enormous amount of travel required of a member of the Board of Councillors. All officers' and committee reports were accepted. The newly formed Cancer Committee recommended that the House create a committee of staggered terms

to conduct a series of cancer symposia before county medical societies. Such a resolution was carried and created thereby a Committee on Cancer Education.

The Society was asked, by resolution in the House of Delegates, to endorse the proposed gift of Agnes Memorial Sanitarium to the State of Colorado as a place to treat indigent tuberculous persons. The resolution was adequately discussed, failed of passage, and has since been referred to the new Committee on Public Policy.

An amendment adding the nursing profession to the dental, pharmacal and veterinary, with which the Committee on Cooperation confers, was added to the by-laws.

At the last session of the House, an appropriation of three hundred dollars was granted for use of the University of Colorado School of Medicine and Hospitals in the establishment of a complete change in the system of admissions to the Colorado General Hospital. The institution is to use what is known as the "penalty questionnaire" system, which was recommended by this Society's Advisory Committee to the School of Medicine.

A motion was also passed creating a committee of three, to be appointed by the President, to cooperate with the State Board of Health in studying the public health conditions in the state.

Banquet guests are enthusiastic in their praises of the speaker, Dr. Olin West, Secretary and General Manager of the American Medical Association. Dr. West urges our preservation of America's freedom from the political domination which has ruined the medical profession of Europe. The profession cannot be conducted successfully on the mass production plans of industry, but must be carried on as from one human being to another. The speaker also assailed the sickness insurance plans now effective in Russia, England, Germany, and France. It is his firm conviction that all such schemes are resulting in a constant deterioration of the quality of medical service. He alluded to the fact that certain groups both in and out of the profession have advocated such schemes in this country and have sent investigators to those countries for study of

their activities. Such students have been carefully guided along the rosy pathways, gaining anything but a fair representation of the true state of affairs. Dr. West regrets that too many American physicians, who should know better, choose to believe these biased reports rather than those of investigators whose work has been carried on unknown to the governments in those countries, particularly Russia. There is also potential danger in the tendencies of lay administrators and boards who are unqualified to judge the quality of medical service.

The popular choice of our convention city has again been demonstrated in the election of Colorado Springs for the 1934 meeting.



Annual Registration In Kansas.

OUR neighbor's 1933 legislature enacted a registration law similar to our own—which, by the way, is not popular. Since many Colorado physicians are registered in Kansas, it is well that we should be familiar with this act. All physicians who practice in Kansas must register with the Board of Medical Registration and Examination between July 1 and October 1. Failing this, the name is stricken from the register; restoration is possible only by a payment of five dollars. Forms for registration may be procured from the secretary, Dr. C. H. Ewing, Larned, Kansas.

Despite the resentment to such annual registration fees, they have advantages. It is the only dependable means of preventing the practicing of unlicensed or inadequately qualified practitioners. Heavy penalties for violation practically preclude imposters. It provides additional funds for enforcement of the medical practice act. Publication of a directory is also made possible. When a doctor locates in a community, the secretary of the board should be notified if he is not properly listed. The public is thereby given some measure of protection against irregulars.

Potassium Guaiacol Sulphonate, when called Thiocol, costs 479 per cent more.

PRESIDENTIAL ADDRESS*

GERALD B. WEBB, M.D.
COLORADO SPRINGS

Tradition demands that he whom you honor by electing him president of the Colorado State Medical Society should give his fellow members an address which pertains to the field of our art. The anecdote comes to mind of the little boy who went into a drug store and was told by the druggist that he knew it was candy the little chap wanted. "Of course I want candy," was the reply, "but I have to buy soap." So instead of a joyous contribution for your amusement, I must deal with serious matters for your consideration! The time is out of joint and efforts are being made by all statesmen to set it right. We are in the midst of a transformation, and one is at times reminded of a very sick man in a hospital, who is going to get well anyway, but young physicians are trying every new remedy. The older ones wish them success and only hope that convalescence may not be thereby delayed. Some perhaps would compare the present situation in politics to the failure of the general practitioner and the calling in of specialists for a hopeless patient.

A physician who dabbles in economics is apt to make mistakes, yet many of us feel that the doctors of economics of the present day are just as much at sea as we were in the trying influenza epidemic of 1918.

We should all like to know how the historians of the future will account for our present predicaments. It seems incredible that the United States, which was in a period of depression and was a debtor nation to the tune of three billion dollars in 1914, yet came out of the war as a creditor nation with nine billion dollars to loan, should now be in such an economic plight. Two qualities we may be sure will be ascribed to us by future historians. For altruism—there is no people so generous as our own—we shall receive great praise. Unfortunately our business methods will not be found

praiseworthy and it will be shown that in these we have lamentably failed.

There can be no doubt that the medical profession, impoverished as much as any other professional group, will be given a place on the roll of honor, for all have carried on their care of the sick and have lived up to the highest traditions of their noble profession. Each member has qualified for the admiration expressed by Virgil: "It was his part to learn of the power of Medicine and of the manner of healing and, heedless of glory, to exercise that quiet art."

Our 7000 hospitals, to which three billion dollars have been contributed by churches and by philanthropists, are now imperiled. Hospitals have been for the most part founded and maintained by religious orders and by philanthropists when they should have been paid for by the people. While it is true that all would like to have the best motor cars, the majority content themselves, and can do well, with cheaper models. But in medical service all need, and should have, the best. Unfortunately for the purse, the cost of medical service due to the great advances in medicine has now reached a figure that few can afford.

You are familiar with the reports of the Committee on the Costs of Medical Care, which were recently published. Time allows only mention of the fact that the majority report recommended the socialization of medicine and the minority report favored retention of individualism in medicine. The question at once arises, if individualism in business is now being sacrificed, can individualism in medicine remain? It has been said that in business "rugged individualism" is to be replaced by "robust collectivism," and if this is to embrace medicine it is the physicians who should chart the course and not the laymen. To a certain extent the war served as a demonstration of socialized medicine and perhaps many of our colleagues were happier then, receiving their monthly pay checks, than they are today, unable to

*Delivered before the Sixty-third Annual Session of the Colorado State Medical Society at Colorado Springs, September 15, 1933.

collect their accounts. It is very evident that in the kaleidoscopic and momentous changes in our economic system, which are accelerating like a falling body, the medical profession must take the lead, without delay, in formulating procedures in medical economics. Otherwise, as a friend high in government circles recently forecast to me, we shall have a steam-roller pass over us.

Are we as quick to pick up new ideas as we should be? I can recall the coming, after many years and against great opposition, of the ideas of the postal savings and of the parcel post from Europe; and today we are urged, and none too soon, to imitate Scotland Yard. Well do I remember being seated next to a high ranking medical officer at a base hospital in France and being asked where a certain Major had gone. I replied he had gone to study the reconstruction camps of the British, who had had several years of experience. "Nonsense," was the retort, "why cannot we start our own reconstruction camps without imitating the British?" Such smugness is fortunately not general. The Panel system of medical service in England (Insurance act of Great Britain) which has recently celebrated its twenty-first anniversary, was foisted on an unwilling profession and copied and improved by Lloyd George from a German model. The system has the advantage of allowing one who is insured to select his own physician. It would seem that this Panel system has been a success, and a commission of physicians should be sent to make a thorough investigation. The unique medical service of the "Highlands and Islands" of the Hebrides country, which has recently spread to parts of Kentucky, and the Dawson "Health Centre" schemes also need careful study.

Perhaps I may be pardoned for imitating the man who placed an ostrich egg in a hen roost in order to show the hens what other industries were doing. However much we may disapprove the Russian form of government, yet in medicine and public health advances have been made in the last few years which should shame us. In the New Republic, April 5, 1933, a preliminary report

is made of an extensive tour and a thorough investigation recently made in Russia by Sir Arthur Newsholme and John A. Kingsbury. It happens that both are known to me personally and their authority in public health matters is unquestioned. Everything pertaining to medicine was investigated, and science was found to be the religion of the rulers. Let me quote a paragraph. "We were forced to conclude that we were not being victimized by a window-dressing display, and that indeed, a revolution in medical service had taken place in Russia, the methods and procedures of which constitute a challenge to the rest of the world." One must read the whole article to realize the extraordinary results being obtained which in many instances "are practical and scientific rather than sentimental." The doctor has a six-hour working day and salaries vary according to qualifications and type of work, more being paid for those engaged in epidemic work, in industrial centers, and in remote districts. Ninety per cent of the doctors work in state institutions, but these are allowed also private practice. Those who are interested in their marriage relations and the practical abolishment of prostitution should re-read Bacon's "The New Atlantis." In this same fable international trade is scorned, but missions were sent abroad to bring back not gold, silver and jewels, but all the science and knowledge of the world, and these are referred to by Bacon as "God's first creature, which was Light." The article referred to on the Russian medical transformation ends with the following, "When we begin blocking in the outlines of an American plan which will provide at once adequate medical service for the whole population, we should be stupid indeed if we ignored recent developments in the Soviet Union which constitute a challenge to American medicine."

And this leads to the beams in our own eyes. Our many defects in public health administration may be gleaned from The U. S. Public Health Reports for 1931. The report on Colorado is not one to be proud of, as you may judge when some forty rec-

ommendations are made for improvement. The death rate in Colorado is higher than that in the nearby states of Kansas, Utah, Wyoming, and Nebraska, even after deducting deaths from imported tuberculosis. As an illustration we find that the deaths in Colorado from preventable disease such as typhoid fever, diphtheria, and smallpox have averaged in recent years 27 as against 17 in the registration area of the United States. And modern medicine considers it a disgrace for any of these diseases to occur. In 1931 our infant mortality rate, which constitutes a sensitive barometer of public health conditions, was 94.3 as against that of 62.8 in the registration area. It has been claimed that our Mexican population influences this, but it must be noted that California with a high Mexican population has a low infant mortality. Ours is a health resort state with a wonderful climate, and we should have the best health and the lowest death rates in the Union. We have no malaria, no hookworm, few negroes, few Indians, and a small industrial population. Nevertheless our death rate is much higher than it should be.

On behalf of the White House Conference on Child Health and Protection, a study of the amount of compliance with the standards of production of Grade "A" milk, raw and pasteurized, such as cleanliness and fly control, construction of dairies, cooling, bacterial counts, etc., was only 54 per cent compared with 86 per cent in many other states. The average of the qualities of raw milk sold was 74 per cent against 94 per cent in an adjoining state. The average for quality in pasteurized milk was 73 per cent against 87 per cent in many other states.

"Public Health Administration in Colorado," by C. E. Waller, for 1931, reads: "The prevention of mortality from heart disease, cancer, respiratory infections, and diseases of early infancy and childhood depends largely on the results of intensive educational work and provision of adequate medical care and advice." And again "The pollution of streams is becoming increasingly important in Colorado as a menace to

the limited water supply . . . and as a hazard involved in irrigating fruit and vegetables." The Platte, Fountain, and Arkansas rivers are simply open sewers. The law strictly forbids the pollution of streams, but it is done by almost every city in the state. Our roads are lined with hay-fever weeds when insect pollinated flowers, such as sunflowers, bee-plants, and sweet clover, might easily be planted in the upturned soil. The water supply of different cities is reported as partially pure, which is as nonsensical as describing it as partially sterile. The government is making vast expenditures for good roads—and we may need them for our bicycles! Would that some of this money could be diverted to improve our dairies and our water supplies, and to aid in eradicating hay-fever which has been so serious this year.

The Board of Medical Examiners has received much criticism. The Journal of The American Medical Association for April 22, 1933, in discussing Medical Licensure Statistics for 1932, relates that Colorado is the only one of its geographical group of states which licenses graduates of non-approved medical schools to practice medicine. There are only six other states in the country on this blacklist. The article continues thus, "In Colorado, osteopaths are admitted to the examination for a license to practice medicine. They have no separate board. The Statute of Colorado is silent with respect to the scope of practice authorized by a license issued to an osteopathic applicant. Applicants, apparently, are issued licenses to practice medicine generally." The question at once arises as to whether our increased death rates and the ignorance of our people in hygienic knowledge are in part due to such licensing? The article referred to adds: "In Colorado, Illinois, and Texas the state board of medical examiners is vested with discretionary power which could be more vigilantly exercised." Since my election to The Colorado State Board of Medical Examiners, I have attempted to study the present situation with the help of Dr. David A. Strickler, who served the Board so faithfully for many years.

When prosperity was with us the medical profession extended its program. The dues of the State Medical Society doubled and enabled the employment of an excellent permanent secretary with permanent offices. In 1929, a State annual registration fee of \$2.00 was assessed against every physician and surgeon in Colorado, and against chiropractors, osteopaths, chiropodists, and midwives. The amount collected by this registration fee, in 1931, amounted to \$6826.00. Of this amount, \$4802.00 was collected from medical practitioners and \$2024.00 came from the other groups mentioned. The money has been used to improve the work of the State Board of Medical Examiners whose income from other sources has dropped some \$3000.00. Since these funds have been available, the prosecutions of the State Board have increased from 35 to 102 annually. The function of the State Board of Medical Examiners is to safeguard the health of the people of Colorado. While the change in the economic situation demands retrenchment and "according to her cloth she cut her coat," we must hope that Colorado will not have to recede from the excellent work done by the State Medical Society and that attempted by the State Board of Medical Examiners. It is certainly our misfortune that, as yet, no Basic Science Board exists in Colorado, such as operates well in other states.

The Twenty-ninth General Assembly of our State recently enacted Code Bill No. 30, which places the State Board of Health under the Division of Public Health. The Secretary of the Board shall be the Chief Executive Officer who must be a licensed Colorado physician experienced in public health work. The opportunity is given such an executive officer to remedy all the public health defects which so badly need attention.

Running parallel with the depression we have decreasing birth rates and an increase in malnutrition in children. The latter is of the greatest concern. It results from unemployment and can not be excused in a country with over-abundance of food supplies.

To instance the growth of unemployment around us—in June, 1932, the Community Chest of Denver gave relief to 3572 charity cases, but in June, 1933, aided 16,610 charity cases. The Denver Tuberculosis Society states that the increasing malnutrition of Denver children shows a direct ratio with the increased unemployment.

The Children's Bureau in Washington, in its News Summary for July 12, 1933, stresses the increased malnutrition in children of school age and pre-school age in many parts of the United States. The same News Summary quotes a study of conditions in certain districts of New York City which shows an increasing infant mortality and also an increasing death rate from pulmonary tuberculosis. The tuberculosis death rates in twenty-one of these districts shows an average increase of 23.5 per cent. Our government is at last awake to the fact that the prolonged depression is increasing morbidity and mortality and every effort should at once be made to see that the proper nutrition of children is maintained. The average infant mortality for the United States is 56.8 per cent per 1000, while for 1932 in Colorado Springs it increased from 54.7 to 64.6. Fort Collins reached a rate of 143, while Boulder reached the remarkably low infant mortality rate of 32. The infant mortality rate, for 1932 in the United States, was 58, while that of New Zealand was 31. The maternal mortality rate of Colorado, for 1931, was 70 compared with 43 in Connecticut. Comparing the maternal mortality rates for thirteen foreign countries, for 1931, it is found that only one country, Chile, had a higher mortality rate than the United States. Such figures speak for the urgent necessity of saving the lives of mothers.

May I take this occasion to emphasize again one of the greatest defects in the education of children. The lack of logic in this country and the lack of cooperation in health matters will never be corrected until children in our schools are taken out into the fields and interested in nature by teachers who are competent to make nature interesting. There are few professional and busi-

ness pursuits which do not have nature as a basis. From the manufacturer to the farmer, knowledge of nature is necessary. With love of nature instilled, the individual becomes resourceful in self-amusement, is never lonesome, and can emulate Keats, who was also educated in medicine.

"Oh solitude! If I with thee must dwell
Let it not be among the jumbled heap
Of murky buildings; climb with me the steep,
Nature's observatory . . ."

How can disease be understood by the layman without a proper appreciation of nature and of natural laws, and how can we get cooperation in our legislatures without such knowledge? The physician is trained in nature, but he is apt to forget that others are not and he should make every effort to see that they should be.

Public health is purchasable. In the latest year for which per-capita appropriation for health work in all states is available we find that the average per-capita expended by all states to be 9 cents, while Colorado spends 8.2 cents. Every member of our State Medical Society should familiarize himself with a copy of "Public Health Administration in Colorado" and circulate it among his friends. Education of the people would insure the coming into effect of the numerous recommendations made therein, including our state tuberculosis problem which needs rapid solution.

It has been well said that "The virtue of prosperity is temperance; the virtue of adversity is fortitude."

The wisdom of the past covers all our perplexities, but even with its help we must use our own intelligence in the trials which are new to us. The medical profession must investigate and advise without delay the best steps to be taken to meet the demand for adequate medical service in this new era. A powerful mental ferment is at work which physicians should guide.

For the time being, our form of government has been modified and the United States is directed by what has been termed

a City Manager. Obviously it may often be difficult for County and State Medical Societies to agree on the new procedures which medical service demands. It may be best for the profession to accept plans which, after complete study, an appointed commission of the American Medical Association could formulate. It should be possible to incorporate into the new regime the advice of Bacon in his Regiment of Health:

"Physicians are some of them so pleasing and conformable to the humor of the patient, as they press not the true cure of the disease; and some other are so regular in proceeding according to art for the disease, as they respect not sufficiently the condition of the patient. Take one of a middle temper or if it may not be found in one man, combine two of either sort; and forget not to call as well the best acquainted with your body, as the best reputed for his faculty."

As the same genius expressed it, "They that reverence too much old times are but a scorn to the new." And who forecast change better than Shelly, himself a one-time medical student?

"Man's yesterday may ne'er be like his morrow;

Nought may endure but Mutability."

This address was started with the belief that our present sick state would recover and I am optimist enough to believe that great good will emerge from our tribulations, even should it seem delayed. A great optimist in medicine and in life, was one of our profession, John Armstrong, who wrote, in 1744, the Art of Preserving Health. Listen to his song:

" 'Tis the great art of life to manage well
The restless mind.

Our greatest good and what we least can spare,

Is hope; the last of all our evils, fear.

Know then, whatever cheerful and serene
Supports the mind, supports the body too;
Hence, the most vital movements mortals feel

Is hope, the balm and lifeblood of the soul."

NON-FATAL GUNSHOT INJURIES OF THE SKULL WITH INTRACRANIAL RETENTION OF THE PROJECTILE*

ERNST A. SCHMIDT, M.D.
DENVER

Character and severity of cranial gunshot wounds depend on numerous factors of great variety. Among these factors the most important are: type, velocity, and caliber of the projectile; nature and extent of the skull fracture; location and amount of the brain damage; presence or absence of infection, and many other complications. The effects and symptoms produced by cranial bullet wounds may be divided into immediate or acute (hemorrhage, cerebral compression, etc.), intermediate (infections), and late or remote (especially epilepsy, paralysis and mental changes).

The marked difference in type and velocity of the projectiles ordinarily employed in modern warfare and in civilian life exclude definite comparisons concerning the immediate effects as they were observed in the World War and the peace-time injuries which form the basis of this report. In contradistinction to the enormous penetrative power and, at close range, often explosive character of military missiles, the majority of gunshot wounds in civilian life, predominantly suicidal or accidental, are produced by soft-core bullets of small caliber and little initial momentum. Especially the effect of the popular .22 revolver is often mild, even in cases when the bullet traverses a large area of brain tissue. Penetration of the entire bony calvarium with emergence of the projectile seems to be extremely rare in peace time injuries.

The damage done to the cranial vault by ordinary revolver bullets, i. e., the skull fracture, is usually not very great. Due to the close aim, segmental and tangential injuries with extensive bone fragmentation and destruction are rarely encountered. The impact in diametral direction results in relatively small and clear-cut fractures. The bullet itself is, as a rule, not deflected intracranially. (The practically always fatal

basal fractures due to shot from the oral cavity lie outside the scope of this discussion).

Complications, especially infections, which, according to O. Marburg and E. Renzi, occur in 65 per cent to 70 per cent of all brain injuries, have a very important bearing on the prognosis of the case, and may materially modify both its immediate and late course. In this connection, the occurrence of meningitis and brain abscesses shall be mentioned.

The extent and location of the brain injuries are of paramount importance. The acute symptoms due to hemorrhage, compression, or destruction of cerebral tissue and nerve tracts determine, to a large degree, not only the immediate therapeutic measures, but also the final prospects of the case. The late cerebral symptoms which, generally speaking, are traceable either to irritation or to destruction of brain substance, frequently represent permanent injuries and are of the utmost importance in non-fatal cases.



Fig. 1. Case 1. S. S. (Senile dementia). Gunshot wound through right forehead. Bullet lodged in right frontal region. Traumatic sequelae: Blindness of right eye; paralytic-paretic changes of eye muscles and of pupillary reaction.

*From the Department of Radiology of the University of Colorado School of Medicine and Hospitals, Denver.

Although statistics vary widely, traumatic epilepsy is reported as the most frequent late symptom after cranial war injuries. Wagstaffe reported an 18 per cent incidence of traumatic epilepsy among 340 cases in the British army. According to the same author, in a total of approximately 18,000 cases of gunshot wounds of the head traced in 1920 by the British Ministry of Pensions, over $4\frac{1}{2}$ per cent showed signs of epilepsy. Considering the comparatively short time of observation, less than two years after the armistice, this percentage cannot be accepted as final. Of more value is a recent compilation by Lene Credner of the University Clinics in Munich, quoted by Isserlin. This compilation refers to about 2,000 cases which were observed over a period of up to ten years. Signs of epilepsy were recorded in 38.2 per cent of all brain injuries. In cases with perforation of the dura the percentage mounted to 49.5; in cases without dural perforation it receded to 20.3. Undoubtedly Credner's statistics comprised many cases which ordinarily might not have been included or might have been overlooked; compared with 70 per cent of "grand mal" and 22 per cent of equivocal epileptiform symptoms like "dizziness" or "absences," it only contained 8 per cent of



Fig. 2. Case 2. G. S. Gunshot wound through left forehead. Bullet lodged in right cerebellar region. Traumatic sequelae: Left hemiplegia.



Fig. 3. Case 3. L. M. (Mental deficiency). Gunshot wound through right forehead. Bullet lodged in right occipital region. Traumatic sequelae: Traumatic epilepsy; reflex changes.

true Jacksonian type. In about two-thirds of the cases infection had been observed. Similarly high was the incidence of epilepsy after surgical intervention while, on the other hand, the presence of an intracranial foreign body did not necessarily increase the percentage of epilepsy. Compared with a percentage of 63 of epilepsy in cases of infection, the respective figures for intracranial bullet retention or presence of intracranial bone fragments were only 42 and 33 per cent. Parietal wounds seemed to predispose. It may be of interest that, according to Isserlin's estimate, in 1930 approximately 25,000 brain injured war veterans were still alive in Germany. In Isserlin's opinion, the prognosis of traumatic epilepsy as to cure or improvement is rather poor (at the best, less than 10 per cent).

Brain abscess is reported next in frequency, often as late as a decade after injury and occasionally accompanied by serious meningitis or hydrocephalus. Often it appeared as if the abscess formation was ushered in by an intercurrent infection, especially influenza. Unfortunately, neither in brain abscess nor in other symptoms or complications statistical figures or percentages are made available.



Fig. 4. Case 4. J. M. Gunshot wound through left side of face (?). Bullet lodged in left occipital region. Traumatic sequelae: Right hemiplegia.

The next frequently reported symptoms were paralyses, pareses, and numerous psychopathic affections ranging from simple amnesias and agnosias to complicated schizophrenoid features and dementias. A frequent observation was the so-called "explosive diathesis," the "hair-trigger temper" of the brain injured, which often gives rise to uncontrollable temperamental outbursts and is well known even in non-medical circles (cf. its classical description in Remarque's "All Quiet on the Western Front").

Of other late sequelae the host of indefinite general symptoms needs mentioning: palpitations of the heart, perhydrosis, angina pectoris, vasomotor and trophic disturbances, edemas, genital atrophy, adiposity, sexual neurasthenia, and many others.

On the other hand, the scarcity or entire lack of symptoms in cases where one of the so-called "silent areas" is involved may be surprising. Apfelberg reported such a case with frontal lobe injury and Levin a similar case with extensive damage to the right temporal area. The best known "silent areas" are represented by the right frontal lobe and by the greater portions of the occipital lobes and of the right temporal lobe. This latter fact explains why frequently gunshot in-

juries in the right temporal region, favored by many suicides and, though occasionally resulting in blindness due to optic nerve injury, may produce very few, if any, brain symptoms.

The only sequelae directly attributable to the retention of soft-core bullet particles within the cranial cavity—chemical reaction due to lead poisoning—was observed in one case only among 500 by Odelga and seems to play a negligible part. While, consequently, a projectile encapsulated or fixed within fibrous or cicatricial tissues may remain quiet and symptomless for an indefinite length of time, the possibility of its migration from a "silent area" into important brain centers or into the ventricular system constitutes a permanent danger.

It seems to be the consensus of opinion of most surgeons that, unless complications develop or a bullet is very easily accessible, late extraction should not be attempted. Da Costa cites von Bergmann who was so impressed by the large number of spontaneous recoveries after cranial gunshot wounds (about 33 per cent, according to Hahn) that he only operated in the presence of urgent cerebral symptoms. Cushing writes that "as a rule there is no particular reason for its (the bullet's) extraction, for in the absence of immediate complications it becomes encapsulated and, unless the missile

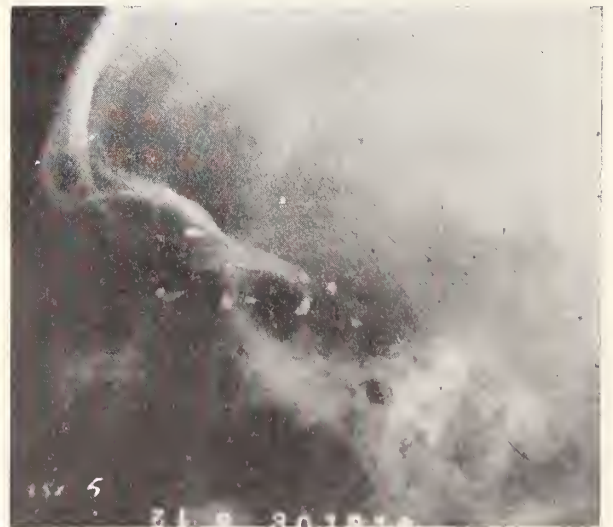


Fig. 5. Case 5. O. M. (Nasal polyposis). Gunshot wound through left temporal region. Bullet particles in left fronto-parietal region. Traumatic sequelae: Loss of eye; impairment of hearing.

chances to lie near the surface, the damage already done will only be increased by meddlesome attempts to locate and extract it." Isserlin recommends conservative procedure "as long as rest prevails" ("solange Ruhe herrscht"). In any case, as von Eiselberg put it, "the dangers of extraction have to be evaluated against the symptoms."

The following eight cases of non-fatal gunshot injuries of the skull combined with intracranial retention of the projectile were examined during the past seven years in the X-Ray Department of the University of Colorado School of Medicine and Hospitals:

CASE 1.

S. S., male, 62 years old, railroad man, killed his invalid wife and shot himself above the right eye with suicidal intent on April 26, 1932. He was indicted for murder but pleaded "not guilty by reason of insanity" and was committed by the court to the Colorado Psychopathic Hospital for observation and diagnosis. An essential factor in the patient's history was the report that he "had a stroke" four months prior to injury. This stroke had produced a temporary partial paralysis of his left arm, his left leg, and the left side of his face, but these symptoms had apparently subsided at the time of admission to the hospital. The caliber of the revolver used in his attempt at suicide was .38.

The neurological findings on admission were: Reflexes normal, Babinski negative. No evidence of atrophy or paralysis of extremities.

Ophthalmological findings: VOD, no light perception. VOS, 1.0-2. Right pupil markedly dilated; no reaction to light or accommodation. Left pupil slightly constricted; reactions, sluggish. Fundi cannot be examined due to lack of



Fig. 6. Case 6. J. M. (Gastric carcinoma). Gunshot wound in right frontal region. Bullet lodged in right fronto-temporal region. Traumatic sequelae; Brain abscess, calcified. (Loss of eye due to another unrelated injury).

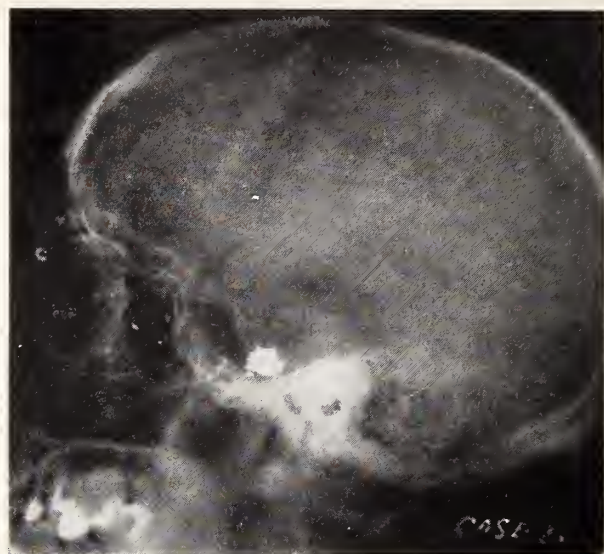


Fig. 7. Case 8. V. C. R. (Manic-depressive psychosis). Gunshot wound in frontal region. Bullet lodged in right temporo-frontal area. Sequelae: Temporary postoperative paresis of right face.

co-operation. Slight limitation of motion of right eye in all directions, especially to the right. Left field of vision full to the confrontation test. Diagnosis: Injury to the right optic nerve, to the right abducens and oculomotor. The right optic nerve is probably severed and descending optic atrophy will probably follow. The motor nerve paralysis may be due merely to contusion and hemorrhage and may recover. Blindness of right eye will probably be permanent.

X-ray findings: Intracranial metallic foreign-body, 22 by 11 mm., apparently bullet, about $4\frac{1}{2}$ cm. back of right frontal bone at level of $\frac{1}{2}$ cm. above upper orbital ridge. Numerous minute metal (bullet) particles scattered over right supraorbital, frontal and sphenoidal regions, partly in bone, partly within cranial cavity (Fig. 1).

Psychiatric findings: Examination of attitude, behavior, stream of talk, activity and emotional reactions, sensorium, insight, judgment, etc., lead to the diagnosis of senile psychosis, depressive type.

Patient was discharged with the recommendation of permanent institutionalization in the State Hospital.

CASE 2

G. S., female, 19 years old, housemaid. Patient was shot accidentally in left frontal region, eight years prior to admission to the Out-Patient Department of the Colorado General Hospital. Caliber of revolver, .22.

Clinical findings (Dept. of Neurology and Dept. of Orthopedics): Spastic paralysis of left foot with marked loss of sensation. Left hand somewhat stiff and spastic. Atrophy of left leg, especially from knee down. Patellar and suprapatellar reflexes superactive; Babinski negative. No Achilles reflex; no clonus. Legs of equal length. Slight footdrop, left. Diagnosis: Left hemiplegia.

X-ray findings: 1. Rounded bone defect of about $1\frac{1}{2}$ cm. diameter in left frontal bone near midline. Numerous metal particles in same area. 2. Metallic foreign body, apparently bullet, 10 by 8 mm. in size, in inferior occipital fossa, slightly to the right from the midline. 3. Several small bullet particles scattered from the region of frontal bone defect to the region of bullet retention in cerebellar area.

Patient was discharged on February 6, 1933, to the Denver General Hospital with the recommendation of a Stoffel's operation on adductors and quadriceps group in order to improve gait.

CASE 3

L. M., female, 13 years old, school girl, was admitted to the Colorado Psychopathic Hospital on January 8, 1932, by action of the school authorities for observation and diagnosis on account of progressing mental deficiency. Patient had been shot in right forehead accidentally ten and one-half years previously. No symptoms had been noted until August, 1931, (almost ten years after injury) when "attacks of convulsions, jerking, choking and getting stiff" began. These attacks were accompanied by cyanosis, fall, and loss of consciousness, but never by biting of the tongue or by injury. At time of admission, such attacks occurred two to four times per day. Patient's mental condition was obviously deteriorating gradually since onset of these seizures. The family history revealed that patient's father had been an epileptic for many years, that a maternal aunt had died in the State Hospital for the Insane, that an uncle had been confined there for four years, and that practically all members of the family were "mentally weak."

The clinical examination showed a pulsating tumor, 5 cm. above the outer canthus of the right eye, rising cone-shaped to about 1 cm., apparently combined with some loss of bone substance in the right temporo-frontal region.

Neurological findings: Suggestion of Babinski, left (inconstant). Chaddock positive on left (inconstant). Deep reflexes of upper and lower extremities normal. Diagnosis: Epileptiform seizures, Jacksonian type, on basis of old injury (bullet wound) in right cerebrum.

Ophthalmological findings: Size and reaction of pupils normal. Fundi, vision, and ocular movements normal.

X-ray findings: 1. Oval bone defect, $1\frac{1}{2}$ by 1 cm., over right frontal bone. 2. Numerous small metallic foreign bodies, apparently bullet particles, scattered from frontal area to occiput. 3. Large metallic foreign body, apparently bullet, 8 by 12 mm. in size, within cranium close to occipital protuberance, 3 cm. to the right from the midline (Fig. 3).

Psychiatric diagnosis: Mental deficiency (moron) without psychosis.

Removal of bullet and sterilization (after consent of parents) were recommended by the Psychopathic Hospital, but patient was taken home by her parents before the Department of Surgery could act upon these recommendations.

CASE 4

J. M., male, 39 years old, unemployed, was admitted to the Outpatient Department of the Colorado General Hospital on account of right hemiplegia on January 16, 1929. No satisfactory account of the circumstances of the injury could be obtained; patient only volunteered the information that, eighteen years previously, he was involved in a shooting affray. Soon after the injury, a certain weakness of the right arm and right leg combined with a foot drop of the right side had developed. After remaining stationary for about fifteen years these symptoms had become markedly worse during the preceding three years.

Neurological findings: Right arm spastic; right knee jerk hyperactive. Right ankle-clonus negative. Left reflexes slightly increased. Diagnosis: Right hemiplegia.

X-ray findings: Metallic foreign body, apparent-

ly bullet, 11 by 15 mm. in size, in left occipital region, about $1\frac{1}{2}$ cm. from inner cranial wall and about 3 cm. from the midline. Many small metallic fragments in region of left antrum and sphenoids (Fig. 4).

Massage treatment was recommended by the Department of Orthopedics. Patient's condition was unchanged on discharge.

CASE 5

O. M., male, 37 years old, laborer, was admitted to the Outpatient Department of the Colorado General Hospital on May 5, 1930, for obstruction of the right nostril and partial obstruction of the left nostril due to polyposis. The intracranial bullet fragments were incidentally discovered during an x-ray examination of the paranasal sinuses. Patient had been shot accidentally twenty-nine years previously. The left eye was missing; hearing was slightly impaired. There were no complaints nor evidence of neurological pathology.

X-ray findings: Small metallic fragments in left orbit and backwards to region of external auditory canal. Right frontal sinuses absent; left frontals very small and cloudy. Right ethmoids cloudy; left ethmoids hazy. Right antrum radiopaque; left antrum cloudy. Sphenoids small and hazy (Fig. 5).

Patient was treated for his nasal pathology and failed to return for further examination.

CASE 6

J. M., male, 67 years old, railroad worker, was admitted to the Colorado General Hospital on May 18, 1930, on account of marked difficulty in swallowing, persistent vomiting, and rapid loss of strength and weight. On admission, patient was in a cachectic condition and both clinical and x-ray findings pointed to gastric malignancy. Absence of the right eye and a tumorous enlargement over the right zygoma indicated an old injury. According to the hospital records, patient had been shot accidentally thirty-eight years prior to admission. The bullet had never been removed. There was no information regarding hospitalization or disability at the time. Eight years later, on occasion of a mine accident, a piece of steel pierced patient's right eye, necessitating its enucleation. Patient had been engaged in very strenuous physical work, first as a miner, later as a railroad man, until six months before his death, which occurred six days after admission to the hospital.

The x-ray findings of the skull were: Destruction of outer and lower parts of right orbit. Many small and two large metallic bullet fragments, the largest 15 by 15 mm. in size, embedded in an area of homogeneous density, 7.5 by 4.5 by 3.5 cm. in diameters, probably due to old calcification (Fig. 6).

The autopsy findings were: 1. Carcinoma of the cardia and lower esophagus. 2. Chronic passive congestion of the liver. 3. Pleurisy with effusion, left side. 4. Metastatic growths on mesentery. 5. Arteriosclerosis. 6. Absence of right eye. 7. Mass in right temporal region extending down over zygoma.

Unfortunately, the permission for an autopsy of the skull and brain could not be obtained and a detailed examination of the reported tumor and radiopaque area, probably a calcified brain abscess, could not be made.

In the following two cases, the bullets were removed by the Department of Surgery.

CASE 7

E. W., male, 36 years old, barber, shot himself on account of marital difficulties on February 2, 1927, and was admitted to the Colorado Psycho-

pathic Hospital three weeks later. The bullet was removed on March 21, 1927, approximately seven weeks after trauma. A re-admission in April, 1927, in order to prevent other suicidal attempts made a follow-up examination possible.

Clinical examination on first admission: Some exophthalmus, bilateral. Fresh bullet wound on the back of head. Pupils, of normal reaction and appearance. Hearing good. Few rales in lower right chest and some dullness over right apex. Extremities negative. Patellar reflexes exaggerated on both sides. Babinski and clonus negative.

Ophthalmological findings: No pathology noted. Eye grounds normal; discs slightly pale.

X-ray findings, March 1, 1927: Metallic fragments, the largest 7 mm. by 10 mm., in posterior fossa of skull against anterior surface of occipital bone, 3 cm. above internal occipital protuberance and about 1½ cm. to right of midline. Small bone fragment anterior to bullet. March 22, 1927: Trephine opening, 2 cm. in diameter in posterior occipital region. Metallic fragments, reported previously, no more visualized.

Operative removal of bullet, March 12, 1927. Surgical report: Part of bullet found resting on inner table of skull in occipital region, the inner table having been pushed into cranium by force of bullet. Size of bullet, 10 by 7 by 2 mm.

Psychiatric diagnosis: Affective disorder (depression) due to marital trouble.

On re-admission, patient appeared more agitated and depressed. The physical findings were unchanged.

CASE 3

V. R. C., male, 42 years old, broker, shot himself in suicidal intention through glabella on October 8, 1926, and was admitted to the Colorado General Hospital on the same day. Caliber of revolver used, .32. Patient's history revealed two previous attempts at suicide by means of veronal.

Physical examination on admission: Patient conscious but irritable. Complaints of headache. Ecchymosis of both eyelids. Evidence of gunshot wound in forehead. Attacks of vomiting. Pulse 72. Hemoglobin 78; erythrocytes 4,360,000; leukocytes 10,500; blood pressure 122/68.

Ophthalmological examination: Right pupil, smaller than left and sluggish in reaction to light. Vision normal. No strabismus, ptosis, or nystagmus.

Neurological examination: Patellar reflexes normal. No Babinski; no clonus. Motor power and sensation of head and extremities unimpaired. No atrophy.

X-ray report: Evidence of bullet, 1.7 by 1 cm. in size, in right middle fossa next to sphenoid body, 2 cm. to right of midline. Chain of numerous metallic bullet fragments extends from glabella to sphenoid body.

The bullet was removed on October 12, 1926, four days after injury. The operative report was: Trephine opening made anterior to external auditory canal and just above the level of the zygoma. Through the present opening of the dura, bullet was located and removed. Drainage tube placed down to the opening of the dura. Considerable oozing of blood because of laceration of small vessels by bullet. Size of extracted bullet, 1.7 by 1 by 0.5 cm.

Three days after operation some weakness of the right side of the face and of right masseter

was noted, but this symptom subsided before discharge from the hospital on October 23, 1926.

Psychiatric diagnosis was: Manic-depressive psychosis; depression (reaction type) due to business worries.

Summary

Although the small number of our cases does not allow any definite conclusions, it is interesting to note that, in our series, paralytic or paretic symptoms were present in three-fourths of the cases and so far outweighed traumatic epilepsy which was observed only in one case. In the majority of cases these paralytic or paretic manifestations were light, amounting to reflex disturbances and pupillary changes only. In one of these cases the temporary "weakness" of the right side of the face developed after operative removal of the bullet. In two cases hemiplegia was present, but in neither case was the resulting disability marked enough to prevent patient from working. The case of traumatic epilepsy showed pronounced mental deficiency for which, however, the traumatic etiology is very doubtful if we consider the family history.

The case of healed (calcified) brain abscess demonstrates to what extent brain tissue in a "silent area" may be damaged or destroyed without the development of relevant clinical symptoms. This patient did very strenuous physical labor, partly as a miner and partly as a railroad worker for fully thirty-six years after the injury. The diagnosis of "calcified abscess" is given in preference to "calcified hematoma" for clinical considerations. It is hardly conceivable that an acute hemorrhage of this dimension could occur without fulminant clinical phenomena while, on the other hand, the more or less symptomless development of even large brain abscesses is not an unusual observation. It must be conceded, however, that similar conditions might apply in the case of a slowly forming hematoma due to gradual oozing of blood although our search of the medical literature failed to mention such a case. It is significant that this patient as well as Case 5 (loss of the left eye) were admitted to the hospital for diseases entirely unrelated to their previous injuries, the former on account of gastric carcinoma (of

which he died), the latter on account of nasal polyposis.

Three cases of psychosis (Cases 1, 7, and 8)—one of senile dementia and two of manic-depressive psychosis—were of pre-traumatic origin and rather the cause than the result of brain injuries.

The site of entrance of the bullet was the frontal region in six cases, the temporal region in one case, and the occipital region in one case. The site of the final bullet retention was the frontal area in one case, the fronto-parietal area in three cases, the occipital area in three cases, and the region of the cerebellum in one case. In two cases there was loss of an eye, in another case marked impairment of hearing. An evaluation of the late effects and symptoms of cranial gunshot wounds seems to confirm the assertion that these manifestations are chief-

ly dependent upon the amount and location of the brain damage combined with other complicating factors, especially infection, and are but little influenced by the intracranial presence of the projectile.

REFERENCES

- ¹Apfelberg, B.: Gunshot Wound of Frontal Lobe without Symptoms. U. S. Vet. Bur. Med. Bullet. Vol. 6, No. 10, October, 1930.
- ²Cushing, H.: Gunshot Fractures of the Skull in "Keen's Surgery," Vol. 3, Philadelphia, 1908.
- ³Da Costa, J. C.: Modern Surgery. Philadelphia, 1925.
- ⁴Isserlin, M.: Ueber die Bedeutung der Erfahrungen an Kriegshirngeschädigten Der Nervenarzt, Vol. 3, No. 10, Oct., 1930.
- ⁵Levin, J. J.: Unusual Case of Self-Inflicted Wounds Through Skull Followed by Recovery. Brit. Med. Jour. 2:930, Nov. 24, 1928.
- ⁶Marburg, O., and Renzi, E.: In "A. von Eiselenberg's Lehrbuch der Chirurgie." Publ. Springer-Wien, 1930.
- ⁷Wagstaffe, W. W.: Incidence of Traumatic Epilepsy After Gunshot Wound. Lancet, 2, 861, Oct. 27, 1928.

THE UNANIMITY OF THE PREGNANCY, MENSTRUAL, AND ESTRUS CYCLES

T. MITCHELL BURNS, M.D.
DENVER

The intelligent use of any of the female sex hormones requires a knowledge of the phases of the menstrual cycle and what is occurring in these phases. To understand the literature on the sex hormones, the estrus cycle and its phases also must be understood.

The estrus cycle is the non-fertile reproductive or sexual cycle characterized by a definite estrus, heat, or sexual desire period—a definite mating period. It occurs in all mammals except human beings.

The menstrual cycle is the non-fertile reproductive (or sexual) cycle characterized by a menstrual or bleeding period. It occurs in all primates and to some extent in some sub-primates. Female monkeys and apes (lower primates) have a combined menstrual and estrus cycle. Human females have no definite estrus period.

The pseudo-pregnancy cycle is the non-fertile reproductive (or sexual) cycle characterized by a corpus luteum stage in which the uterus undergoes changes similar to those of early and even later pregnancy (except no placenta or embryo). It occurs normally in the unmated dog and guinea pig

and artificially in the mouse, rat, rabbit, and ferret. The dog near the end of the period makes a nest.

The menstrual cycle of women and female monkeys and apes is an abbreviated pseudo-pregnant cycle in which the uterine changes are those of early pregnancy, i. e., of the period in which the fertilized ovum is traversing the tube (tubal pregnancy period).

A psychologic pseudo-pregnancy occurs in some human females. In human females possibly the pseudo-pregnancy may be due to a persistent corpus luteum which, while able to sensitize the uterus, is not able to cause a definite growth. Menstruation may be lessened or absent (often near or at menopause), the abdomen may be enlarged, fetal movements apparently felt (gas or contractions of the abdominal muscles), and at times "labor pains." No definite enlargement of the uterus is ever found in this form of pseudo-pregnancy.

Definite estrus in one cycle and menstruation in the other cycle gave the idea that the estrus and menstrual cycles are radically different. Their differences, however, are

no more than the differences which exist between the estrus cycles of certain species.

The following natural or physiologic phases occur in the pregnancy, menstrual, and estrus cycles of all placental mammals. While the arrangement of the three cycles into like phases is new, the terminology coincides with that in general use in recent literature.

- | | | |
|------------------------|---|---|
| 1. Follicular phase: | { | Maturation of follicle |
| | | Proliferating endometrium |
| 2. Ovulation phase: | { | Proestrus and estrus |
| | | Distention and rupture of follicle and escape of ovum |
| | { | 'Interval' endometrium (Metestrus) |
| 3. Luteal phase: | | Corpus luteal development |
| | { | Glandular endometrium |
| | | Pseudopregnancy or pregnancy (Diestrus) |
| 4. Degenerative phase: | { | Corpus luteal degeneration |
| | | Endometrial desquamation |
| | { | Menstruation or labor |
| 5. Quiescent phase: | | Fertile cycle: lactation |
| | { | Infertile cycle: |
| | | absent or becomes anestrus |
| | { | Non-breeding season) |
| | | |

These phases are called "natural" or physiologic because during each of these phases coordinated hormonal or histologic changes are known to occur in the pituitary, ovary, uterus, tube, and vagina in all placental mammals so far studied.

In my previous article, "The Natural Phases of the Reproductive Cycle of All Placental Mammals," (Colorado Medicine, August, 1930), the pregnancy, menstrual, and estrus cycles were divided into like phases for the first time. I regret, however, that in this article I failed to put ovulation, i. e., distention and rupture of the follicle as a phase distinct from follicular maturation. Long and Evans made this distinction in 1920 (Anat. Rec. April); Evans and Swezy (A. J. of P., March, 1931) use the term "ovulation period;" and Papanicolaou (A.J.A., May, 1933) prefers the term "ovulative stage."

The purpose of the present paper is to correct this omission, to adopt a newer terminology, and to show that the natural phases of the pregnancy, menstrual, and estrus cycles are the natural phases of the reproductive hormones and that all the phases of the fertile and infertile reproductive cy-

cles are based on the phases of the hormonal cycle.

From my original article I wish to make the following statements: "The reproductive cycle is divided by Frank and others into fertile and infertile. Menstrual and estrus cycles are but variations in the infertile cycle. Marked variations in the reproductive cycle are produced by the occurrence of pregnancy, pseudopregnancy, menstruation, and estrus, and marked variations in the reproductive cycle occur in different species, but by beginning the reproductive cycle with the period of maturation of the follicle and ovulation and carrying it through its natural periods, which occur when reproduction (the real purpose of the cycle) takes place, it is easy to show that the same periods in miniature exist when reproduction does not occur. It also demonstrates that the same natural periods exist in the female of the human species as in the lower animals."

Other authors have expressed themselves along similar lines. To quote Beard (1900): "Menstruation is an abortion of a decidua prepared for an egg . . . which was not fertilized." Hartman (Scientific Monthly, July, 1931): "Each cycle is an abortive pregnancy which recapitulates gestation in miniature." (J. of A.M.A., Dec. 19, 1931): "Fact on fact is accumulating to demonstrate the generalized character of the reproductive process." Young (B. M. J., Dec. 20, 1930): "The sex cycle throughout the mammalian kingdom exhibits the same general character. Thus three main phases in the cycle are (1) Pre-ovulation or proestrus. 2. Ovulation or estrus. 3. Postovulation or luteal. In general terms the sequence of events obtaining in the cycle of the lower animals is repeated in man and monkeys, but there are some striking differences which have led to some difficulty in identification." Bourne and Williams (Recent Advances in Obstetrics and Gynecology, 1932): ". . . now it is possible to describe the human cycle roughly in terms of the estral phenomena of experimental animals. Two phases differing in minor points in various species but essentially the same physiologic process are first the

follicular phase which begins with the proestrus or at the close of menstruation in women and the second or luteal phase which begins 'a few' hours after the rupture of the follicle. The endometrium in the luteal phase becomes that of pregnancy—decidual or that of pseudopregnancy—a condition strongly resembling decidua." Zukerman (The Social Life of Monkeys and Apes, 1932): "The difference between the estrus cycle and the menstrual cycle is not of kind but of extent of endometrial degeneration. The 'follicular phase' in old world monkeys and apes is intermediate between the human and lower mammals, hence of great aid in the menstrual analysis and comparison with the estrus cycle of lower mammals." Papanicolaou (A. J. of A., May, 1933): The preceding leads 'to the old assumption that human menstruation is of a pseudoparturient or pseudoabortive character (Beard, '97). In corroboration of this, late findings show that toward the end of menstruation a pseudo post-partum stage has been identified marking the end of the destructive period just as the guinea pig stage 3. marked the end of the utero-vaginal destructive phenomena. Further, the human post-partum smear shows a surprising similarity to stage 3. of the sexual cycle of the guinea pig. As a whole, the smear of advanced pregnancy resembles the premenstrual smear." Brambell (Development of Sex in Vertebrates, 1930): "In some mammals, estrus is always followed by the initial stages of such a process (pregnancy) and when these cease there is considerable disruption of the uterine mucosa and extravasation of blood. This pseudopregnancy phase is a regular feature of the cycle in the human being, but only occurs after copulation in many animals (rabbit, mouse, etc.). Menstruation in the human being is almost certainly the disruptive stage which terminates this pseudopregnancy."

The phases of the fertile reproductive cycle of all placental mammals are considered the same by all authorities. All accept the division of the reproductive cycle into fertile and infertile. The infertile cycle has been separated into the estrus cycle of the

lower mammals and the menstrual cycle of the primates. The estrus and the menstrual cycles have been divided into various phases by various authors and often the phases of one cycle do not agree with those of the other. It is my purpose to show that the fertile, the estrus, and the menstrual cycles all may be divided into like phases—like natural phases—and that these phases in the different cycles are controlled by the same hormones, although the results may be a little different in the different species. Let us now consider the phases of pregnancy, menstrual and estrus cycle separately.

THE FERTILE REPRODUCTIVE CYCLE

The Pregnancy Cycle

All will agree that the following phases occur:

1. Follicular maturation..... Follicular phase
2. Ovulation Ovulation phase
3. Pregnancy Luteal phase
4. Labor Degenerative phase
5. Lactation Quiescent phase

The terms "follicular phase," "ovulation phase," "luteal phase," "degenerative phase," and "quiescent phase" are in common use in referring to the pregnancy, estrus, and menstrual cycles, but no one, to my knowledge, has definitely arranged each of these three cycles into five natural phases.

THE MENSTRUAL CYCLE

Following the same terminology for the menstrual cycle we have:

1. Follicular phase..... Preovulation phase
Post-menstrual phase
2. Ovulation phase
Mid-period; "interval" endometrium period.
Bleeding at times.
3. Luteal phase..... Abbreviated pseudo-pregnancy
Premenstrual phase
4. Degenerative phase
Menstruation and reneration
5. Quiescent phase?

THE ESTRUS CYCLE

The estrus cycle phases then are:

1. Follicular phase..... Proestrus and estrus periods
Preovulation phase
2. Ovulation phase
Basic "interval" endometrium
Basic endometrial degeneration, in some species
Bleeding in a few species
Metestrus phase
3. Luteal phase
Uterine changes, slight to pseudo-pregnancy
Diestrus phase
4. Degenerative phase
Endometrial desquamation; slight bleeding sometimes
5. Quiescent phase
Doubtful in polyestrus animals. In monoestrus species becomes anestrus phase

To make it easy to remember these four active phases, we take the initial letter of each phase in respective order—f-o-l-d—fold; and what we have actually done is to take the four active phases of the three cy-

cles into one fold. If we wish to include the fifth phase which is usually active in the pregnancy cycle and use the term "milk phase" instead of lactation, we have "F. O. L. D. 'M." or "fold'm" all in one. The proestrus period is the first part of the follicular phase, the estrus period the second. The former is the period before the follicular hormone has become sufficient to produce estrus. Ovulation is a distinct phase having its own hormones. It bears the same relation to the follicular phase that endometrial degeneration, i. e., labor or menstruation, does to the luteal or pregnancy phase. With ovulation the follicular phase ends. With labor or menstruation the luteal phase ends. "Ovulation . . . is a sharply demarked event, like birth or death." (Hartman: Sex and Internal Secretions).

Ovulation usually coincides with the termination of estrus, but an excess of follicular hormone may carry the estrus phase beyond the ovulation phase. Ovulation only occurs at the end of the follicular endometrial proliferation phase. (Evans and Swezy, A. J. P., March, 1931). Formerly ovulation was considered to occur before, during, or after estrus, depending upon the species, but now most authorities say it occurs at the end of the estrus phase. Metestrus is the mid-period of regressive changes, (Graves—Female Sex Hormonology, 1931), i. e., the midperiod of degenerative and regenerative changes which follow ovulation and should be considered as the latter part of the ovulation phase. Diestrus is the so-called rest period which follows the metestrus in certain species (rat, mouse, guinea pig) which do not have an active luteal phase. It is a short interval of quiescence which follows the metestrus in some species (rat, rabbit), in contradistinction to anestrus, the long period of quiescence.

Other authors are approaching my classification and are unconsciously, although incompletely, adopting it, as the following quotations show: Edgar Allan (Sex and Internal Secretions, 1932): "The growth induced during the follicular phase raises the genital organs to a high plane of function. Following ovulation, an additional hormone,

progesterin, begins its action . . . and building upon the hyperplastic condition . . . resulting from theelin induces the pseudo-pregnant or premenstrual transformation of the endometrium. Menstrual hemorrhage should logically be placed last in the sequence of events which constitutes the menstrual cycle." Hisaw (Sex and Internal Secretions, 1932): "The menstrual cycle can be conveniently divided into two parts: 1. The follicular phase begins with the cessation of menses and terminates with ovulation. 2. The corpus luteum phase begins with development of the corpus luteum and extends to the following menses."

The fact that the phases as outlined are so simple and so in evidence in all hormonal, histologic, and cyclic discussions, makes me wonder why I need to call attention to them. However, when I read articles such as Papanicolaou's (A. J. of A., May, 1933), and Corner's (Medicine, February, 1933), I decide there is great need of a simplified terminology for the basic phases to which various sub-phases or modifications may be added according to the species under consideration or the author's whim.

Proofs that the estrus and menstrual cycles are but Abortive Variations of the Fertile Reproductive Cycle.

1. The natural phases of the fertile reproductive cycle of all placental mammals are the same, viz., follicular, ovulation, luteal, degenerative (labor), and quiescent (or lactation).

2. The natural phases of the estrus and menstrual cycles up to and including ovulation are the same as those of the fertile cycle and their luteal and degenerative phases can be seen to be the same as those of the fertile cycle, but abortive.

3. The hormones of the natural phases of the fertile reproductive cycle of all mammals are the same as far as known.

4. The hormones of the natural phases of the estrus and menstrual cycles are the same, as far as known.

5. Each new discovery tends to show that the hormones of the infertile reproductive cycles—estrus or menstrual—are the same as those of the fertile cycle.

TRANSFUSION OF BLOOD IN TUBERCULOSIS*

A REPORT OF 50 CASES

CHAS. A. BUNDSEN, M.D.

DENVER

The report of this small group of blood transfusions in tuberculosis is presented in the hope that it will stimulate both discussion and use of an agency in the treatment of tuberculosis which we believe has a greater value than it has been credited with. The suggestion came from our laryngeal department that the pallor of the pharynx and larynx, with or without mucous membrane lesions, which is so common in the tuberculous throat, might suggest the use of transfusion. The cases selected presented symptoms such as hemoptysis, marked secondary anemias, the throat picture above described, and other evidences of progressive activity not improved after long observation and varied treatment. As will be subsequently noted, they were nearly all in the third stage.

A review of the literature since 1667, when John Baptist Dennys reported the first authentic blood transfusion on man, reveals few and feeble efforts with this procedure, as far as tuberculosis is concerned. In 1921, Frelich reported indifferent results on six tuberculous patients transfused with 100 to 375 c.c. of blood at weekly intervals with from two to five treatments for each. In the American Review of Tuberculosis, January, 1929, Gamble reports a few cases of tuberculosis so treated with gradual improvement in appetite, hemoglobin, and general condition.

In our series comprising fifty cases, the donors were selected by the ordinary Moss classification. Cross matching was used in only a few of the recent cases. All had negative Wassermann reactions and care was taken as to their history and general clinical findings. The Lewisohn indirect method with citrated blood was used, and 500 c.c. given in most instances, and while it is true that some of the series coincidentally received other treatments such as tuberculin,

heliotherapy, and pneumothorax, we believe that the blood transfusion as an adjunct to their treatment had such definite value as to merit careful consideration. In a large percentage of this series the favorable improvement following the transfusion, in comparison with the unsatisfactory course they had experienced through long observation before transfusion, was certainly more than ordinary and in a few cases even spectacular.

With the assistance of Dr. Leroy Elrick we have tabulated and classified both the immediate and subsequent individual symptoms and results in this entire series of cases over a period of seven years, but realizing both the confusing and misleading effect upon the listeners' mind of detailed symptoms, numerically expressed, I shall attempt to give you only the outstanding features of final results, both favorable and unfavorable, which seem to me to have been influenced by the transfusion. To put it in a condensed form it is clear to me that thirty-one of this series of fifty cases were materially improved by the transfusion, eleven were apparently unchanged, while five progressed unfavorably, and three had an anaphylactic reaction and were probably injured by the procedure.

A striking feature of the improved class was the **progressive** improvement in the blood picture. In almost every case the red cell count and the hemoglobin gradually increased for over a month. The polymorphonuclear cells were temporarily increased at the expense of the lymphocytes. The improvement in the laboratory findings was made more significant by the clinical observations of improvement in the temperature, pulse, cough, sputum, weight, and color of the skin, nails and mucous membranes. The sense of well-being with its associated cheerful mental attitude also deserves mention. These features of improvement extended over much more time than one might ordinarily expect from a transfusion and

*Read at a meeting of the Denver Sanatorium Association March 28, 1933, at The Swedish National Sanatorium, Denver, Colorado.

seem to logically support the hematopoietic action of the new blood.

In consideration of the cases with unfavorable results, it should first be noted that they were all in the third stage, presenting extremely active and progressive symptoms, but the anaphylactic reactions we regret to record might possibly have been avoided by more careful cross agglutination. One of these died in seven hours after the transfusion, another in one month, and the third in seven months.

Small transfusions of 15 to 20 c.c. have seemed of real value in hemoptysis. We had four who stopped bleeding immediately, one shortly after and one in two weeks. Three of these have had no hemorrhage since, one had hemoptysis one year afterward, and two were recent cases.

We observed chills and fever of varying degree, after the transfusion, in thirty-seven cases, which seemed to have no deterrent effect on their subsequent progress.

Many interesting laboratory findings incident to blood transfusions appear in medical literature from time to time. Salant and Wise in 1917 reported sodium citrate as having been entirely thrown out of the blood stream within ten minutes after its introduction. Competent observers have variously determined the span of life of the introduced blood cells in their new location as being from ten to 113 days. The relative value of the actual increase of oxygen carriers and the hematopoietic stimulus to blood building functions presents many potential phases, which with refinement in methods may mean much wider application of this procedure in the future.

Our experiences have indicated some suggestions and conclusions. The contraindications to the use of transfusion of blood in tuberculosis include pulmonary edema, advanced nephritis, and myocarditis, but in the complicating factor of nephritis, which is not of long standing, small transfusions may be of decided value. The possibility of there being a distinctive value in the blood of a cured tuberculous patient has been considered, and a record of a Von Pirquet reaction of donors would be of interest

in this connection. I wonder whether it is the part of wisdom to confine this valuable procedure to third stage cases alone? If it had not been for the prohibitive cost to our patients we would have repeated the transfusions, for we believe this to be indicated. The patient having had one satisfactory boost, why should we not repeat it at carefully selected intervals? However, since anaphylactic reactions are reported in such repetitions, it is probable that the donor should be changed for each transfusion.

In the battle with the Koch bacillus there are times when the forces of resistance in the unfortunate victim seem only able to prevent advancement of the enemy. At just such critical periods, we have frequently observed that the arrival of the reinforcements of transfusion has resulted in victory instead of defeat.

In conclusion, may I repeat: Transfusion in pulmonary tuberculosis is neither a panacea nor a specific. But it is not a nostrum. We have no delusions that it will cure baldness or balance the national budget. But it is a procedure deserving greater and more intelligent use.

Medical Inspection of Household Workers

A doctor's certificate stating that the bearer is free from tuberculosis and other contagious or communicable diseases must be filed with the city Public Health Department before any person may be employed as a household servant in Newark, N. J., according to a 1930 city ordinance. Examinations may be conducted by a section of the city Health Department without charge, or be made by private physicians. The attention of the examiner is directed to possible indications of venereal disease, tuberculosis, and other conditions of an infective nature. When there is no scar, smallpox vaccination is required. During the first eight months of 1932, over 10,000 examinations of household employees were recorded. —Women's Bureau Bulletin.

Take this Journal home to your wife.

POTASSIUM OLEATE AS A SCLEROSING AGENT FOR VARICOSE VEINS

EARL J. PERKINS, M.D.
DENVER

During the past five years the additions to the armamentarium of chemicals for the injection of varicose veins have increased enormously, but none yet developed has proved ideal, although potassium oleate very closely approaches it.

The properties of an ideal solution would be:

1. A selective action on the intima of the vein with no effect on the surrounding tissue.
2. The injection should be painless.
3. It should be devoid of general systemic toxic effect.

Varicose veins are more susceptible to chemical irritation than the normal vein; if this were not so, a number of the solutions now used would be without effect.

The chemicals in use may be grouped under four heads, with reference to the mode of action:

1. Concentrated solutions which dehydrate the tissue. Among these are sodium chloride, glucose, and glucose-salt.
2. Acid solutions, whose action is not entirely understood, such as ferric chloride and quinine solutions.
3. Alkaline solutions which act by dissolving the intima. Among these are sodium carbonate, sodium hydroxid, sodium salicylate, etc.
4. Solutions which coagulate or combine with the intima. These are represented by phenolic bodies, mercury compounds, etc.

The present wave of injection treatment was initiated by the work of Sicard, using sodium carbonate. This movement was intensified by the introduction of quinine hydrochlorid with urethane, by Genevrier.

In making another attempt toward the ideal solution the alkaline field was chosen

as presenting the most definite action. Oleic acid was chosen because it is a normal constituent of fatty tissues, where it is found as glyceryl tri-oleate. Potassium was preferred to sodium, as its salt is more easily soluble. It was found that the sclerotic action is in direct proportion to the alkalinity, and a series of tests were made to determine the optimum pH.

In actual practice 5 per cent solution of potassium oleate is a slightly viscous, yellowish liquid. It has been supplied in vaccine-capped ampoules, which are very convenient to use. The usual dose is from $\frac{1}{2}$ to 3 c.c., depending upon the size of the vein; it causes a slight burning sensation of about 3 to 5 minutes duration. It does not cause the cramp which is frequently produced by the glucose-salt preparations, and which invariably follows the salicylate injection. It can be used in the presence of any complicating condition which is not a definite contraindication to obliteration of the vein. The surrounding tissue will tolerate as much as 0.5 c.c. without a slough. This amount will produce nothing more than a large, red, indurated area, which subsides in about a week. This is especially noticeable when compared to salicylates and quinines, where even small amounts will cause sloughs.

The sugar and salt solutions are perhaps better tolerated by the surrounding tissues, but do not have an equally strong action on the vein wall, so that some injections, even though properly executed, do not produce the desired result.

Potassium oleate 5 per cent solution has been used by me in the Varicose Vein Clinic of the Colorado General Hospital and in private practice in approximately two thousand injections. In this series of injections extending over a period of six months there has not been a single slough and the number of veins that have required re-injection

to produce the requisite hardening has been noticeably fewer than with any other reagent I have used, including sodium chloride, dextrose, invert sugar, glucose salt, quinine and urethane, sodium morrhuate and sodium salicylate.

Technic

This does not differ from that of other solutions. The instruments required are one 5 c.c. syringe, a needle 25 or 26 gauge, medium bevel, one-half or three-quarters inch in length, cotton, bandage, and alcohol. The patient should be sitting or standing. The required amount of solution— $\frac{1}{2}$ to 3 c.c., depending on the size of the vein—is drawn into the syringe, the skin is cleansed with alcohol, and the needle is carefully pushed through the skin and into the lumen of the bulging vein. It makes no difference what angle the needle makes with the skin or the vein. When the operator is certain that the needle is in the vein, as evidenced by aspiration of blood into the syringe, the solution is slowly injected. The skin is carefully watched for any bulging, showing perivenous injection; should this occur, the site of injection is covered, as below, without attempting to finish the injection at this site. Upon withdrawing the needle the alcohol-soaked pledget of cotton is bandaged tightly over the site of injection and the patient is allowed to return to his normal occupation. The bandage is kept in place for three to six hours. I have not found it necessary to use a tourniquet or occluder.

The injections are started at the distal end of the varices and progress proximally until all veins, which can be seen or felt, have been obliterated. These successive injections are made at intervals of two or three days.

This treatment is primarily an ambulatory treatment, and I feel that the repeated injection of a small dose is preferable to the attempt to obliterate all veins at one sitting.

Summary

The properties and value of solution potassium oleate 5 per cent have been described with reference to its use in obliteration of varicose veins.

CASE REPORTS

RETROPERITONEAL LIPOMA*

GEORGE H. LEE, M.D.
DENVER

Retroperitoneal lipoma is an extremely rare condition. Of the retroperitoneal growths the lipomata are probably the most frequent. Owing to their slow growth and lack of characteristic symptoms they attain great size before discovery. Hirsch and Well have reported the largest growth to date. It weighed sixty-nine pounds and at operation was found to be inoperable. It occupied the whole of the retroperitoneal space, surrounding one kidney and ureter and lying in front of the other; it also projected between the layers of the mesentery.

The earliest case of retroperitoneal lipoma in which operation was performed was reported in 1824 by Lizars. The woman had had an enlargement of the abdomen for nine years. At first her physicians considered her to be pregnant; later Lizars made a diagnosis of ovarian disease and was urged by his patient to operate. Encouraged by the knowledge that ovariectomy had been performed by McDowell in America, he attempted to relieve the woman by an operation. However, he did not find the condition anticipated. The uterus and ovaries were perfectly sound, but there was a flattened tumor at the left sacro-iliac synchondrosis lying beneath the division of the common iliac artery, which he refers to as "obesity of the intestines."

Lipomata may originate at any point in the retroperitoneal space. The most common sites are the perirenal fat, the fat at the root of the mesentery or of the colon, and in the pelvis. One case has been reported as originating in the mesentery of the appendix. Von Wahlfendorf in 132 cases found that 79 per cent were abdominal and 21 per cent pelvic. Of the abdominal tumors 72 per cent were of lateral origin and 28 per cent median.

*The author has references upon this subject. They will be supplied upon request.

These tumors may be pure lipomata or mixed. In an analysis of 153 cases of retroperitoneal lipomata, von Wahrendorf found 46 per cent to be pure lipomata and 54 per cent mixed tumors—40 per cent fibro-lipomata, myolipomata, and fibromyxolipomata, and 14 per cent were undergoing sarcomatous degeneration. They may also develop large abscesses within them, causing acute inflammatory symptoms.

The etiology is obscure. In a series reported by Masson and Horgan, two gave a history of injury, while in two others the lipomata originated in the perirenal fat following the removal of the kidney for stone. The most common age at which these tumors develop is between 40 and 50 years, although no age is exempt. The earliest age on record is that of an infant of one year, reported by Bork and May. Masson and Horgan reported one found in a man 72 years of age. They occur more frequently in females than in males.

Obviously the symptoms of perirenal lipomata depend entirely upon the size and location of the growth and result from pressure and interference of the functions of the various abdominal viscera and blood vessels. A tumor may or may not be observed by the patient. Often the first symptoms noted are an increase in the size of the abdomen with a sensation of fullness and weight, while the actual weight of the patient may decrease. There may be pain in the back and abdomen.

The diagnosis of perirenal lipomata is rarely made except at operation or autopsy. The infrequency of their occurrence and the lack of early and significant symptoms probably account for this fact. The most common preoperative diagnoses in the reported cases were abdominal tumor, ovarian tumor, and tumor of the kidney. However, an accurate diagnosis is not essential as the presence of a tumor with or without symptoms should be sufficient to entitle the patient to operative relief. The growth is fixed and does not descend on inspiration; it may be monolobular or multilobular; it has a semi-fluctuant feel suggesting a cystic growth, or it may be tense. Unfortunately

even in tumors of large size, the growth can not be definitely palpated, owing to the intra-abdominal tension.

Prognosis: Reynolds and Wadsworth in 1906 found in the literature 49 reported cases of which 31 had been operated with a mortality of 48.4 per cent. Since that date there has been a very great increase in the number of reported cases with a very marked lowering of the mortality. It would probably be fair to say that at present it is between 15 and 20 per cent. An earlier recognition of the condition will undoubtedly be accompanied by a further reduction in the death rate.

CASE REPORT

Mrs. E. H., aged 55, was first seen by me on March 10, 1933. She complained of a steadily increasing mass in the abdomen for a period of one year, distress due to mass, headache, and epistaxis for the past two weeks. There was some edema of the lower extremities. I advised her to go to the hospital for routine laboratory and x-ray examinations.

Past History: Pan-hysterectomy (except left ovary) eleven years ago, otherwise irrelevant.

Physical Examination revealed a rather obese, white female of stated age. The head, mouth, teeth, tongue, and eyes were negative. The heart was somewhat enlarged laterally, the pulse regular, the blood pressure 210/110. The lungs were difficult to hear due to the obese condition.

The abdomen was symmetrically enlarged, very tense and firm, especially the left side. The intestines and stomach were plainly discernible on the right. The left side was entirely filled by a very firm, hard mass. Increased intra-abdominal tension was quite marked. Pelvic examination revealed a freely movable tumor puckered in vaginal vault.

Laboratory findings: The blood count showed white cells, 10,400—lymphocytes, 23 per cent; polymorphonuclears, 77 per cent—and hemoglobin, 70 per cent (Dare). The urinalysis showed a specific gravity of 1.013; no sugar or acetone; a trace of albumin; few small casts and occasional pus and epithelial cells.

The x-ray showed an increased density of the abdomen, and none of the abdominal organs could be made out.

The diagnosis of enlargement of the spleen was considered but ruled out on account of the inability to outline the lower border, as the mass extended entirely down to Poupart's ligament. Cyst of the left ovary was also considered, but the vaginal examination proved negative. An abdominal tumor was as near a correct diagnosis as could be made before the abdomen was opened.

The operation was performed under ether anesthesia. A linear incision through the left rectus muscle was made and enlarged at top and bottom. A large tumor was shelled out by dissection with the hand from the peritoneal sac. A smaller tumor was found under the first one posteriorly and above, crowding closely the heart and left lung. The tumors had two separate and distinct pedicles. Closure was made, with drainage. The peritoneal sac was puckered around a one-half inch rubber tube with chromical catgut No. 1.

Plain No. 1 was used for the peritoneum and chromic No. 1 for the fascia. Silkworm anchor stitches and plain No. 1 button-hole sutures were used for the skin.

The patient left the operating room in fairly good condition. Pulse, 120. Twelve inch shock blocks were placed at the foot of bed for ten hours. There was drainage of sero-sanguinous fluid for three days. The drain tube was removed the fourth day, after which a bloody fluid drained through the opening where the tube had been and at the lower extremity of the incision, but healing was complete at the end of the fifth week.

On the second day, epistaxis and edema of the ankles had disappeared. On the fifth day the blood pressure was taken and found to be 170/135—as compared to 210/110 previous to operation. There was some pain in the left chest anteriorly, extending to the diaphragm laterally, which soon disappeared under heat treatment.

Pathological report: Gross appearance: The specimen consisted of two lobular masses, one weighing twenty pounds, the other eight pounds; the surfaces were smooth. Transection through the larger mass showed a yellowish translucent appearance which was homogenous throughout. Transection through the smaller mass showed areas of calcification. Microscopic examination revealed an areolar structure in which were fat cells.

Conclusion

Recurrences are frequent, especially in long standing cases and in those where there has been an incomplete removal. Of 113 cases reported in von Wahrendorf's series, 15 recurrences were noted.

Some operators recommend the transverse incision, but personally I see no objection to the longitudinal incision, separating the fibers of the rectus muscle. This gives ample exposure when lateral retraction is made by an assistant.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

The Vacation of the School Child

(A White House Conference Report)

The report of the Subcommittee on Summer Vacation Activities of the School Child is the most recently issued of the White House Conference Reports. This report opens with a statement of the problem from which the following lines are taken:

"The summer vacation of the school child is a heritage of the past. It is one of those accepted practices which has neither been subjected to analysis nor adapted to the current social situation . . .

"In any effort to promote the child's well-being it becomes important to analyze the provisions made by the community for the child's vacation in order that educational, social, and civic organizations, as well as the home, may focus maximum understanding, interest, and effort on this now slighted quarter of the child's life . . .

"We applaud the well run camp as one of the most educative of available institutions. But not all children can go to camp. It is too expensive. More such facilities must be provided, and they must be made cheaper and public as well as private. With all our wealth and boasted equality of opportunities, opportunities are in fact very, very far from being equal."

Diphtheria Immunization

In a recent paper on "Diphtheria Immunization in Private Practice," Dr. Gaylord W. Anderson and Dr. George H. Bigelow of the Massachusetts Department of Public Health say:

"Diphtheria prevention through mass immunization in public clinics has become so generally accepted as a sound public health procedure that too little attention has been given to the part played by the physician in his family practice. It has been said that these clinics deprived the practicing physicians of the opportunity to carry out such immunization in their practice, inasmuch as the public would not pay the usual office clinic. On the other hand, certain physicians have testified that the conduct of an active diphtheria prevent campaign within a given city stimulated a demand for this service among their clientele. These conflicting views have almost invariably been based on personal opinions, adherents of both doctrines being found in all communities, neither having anything but the most limited factual data to support the conclusions.

"In Massachusetts toxin-antitoxin is furnished by the State to all boards of health and physicians free of charge. This is supplied in vials of 20 c. c. for clinic purposes, and in packages of three 1 c. c. ampoules

for office use by physicians. It has been assumed in this study that the use of the 1 c. c. ampoules has been limited to private practice. This assumption has been checked in certain of the communities using the greatest amounts and found to be essentially correct. It is entirely reasonable that it should be, owing to the time that would be consumed were the individual ampoules used in a clinic. Thus we feel that within reasonable limits the use of such ampoules constitutes a rough index of the extent of immunization in private practice."

This investigation has lead to the following conclusions:

1. The active conduct of diphtheria immunization clinics under official auspices creates a demand for immunization in the office of the private physician.
2. The extent of this demand for private immunization varies directly with the intensity of the clinic program.
3. Without an actively conducted program for diphtheria immunization, the public demand for this service is negligible.
4. Within reasonable limits the incidence of diphtheria in a community varies inversely with the intensity of its diphtheria immunization program.

Washington's New State Health Officer

Governor Martin of the State of Washington joins former Governor Roosevelt of New York State and Governor Pollard of Virginia in setting aside political influence in his selection of a State Health Officer. At the Governor's request, the Surgeon General, U.S.P.H.S., has assigned Passed Assistant Surgeon E. R. Coffey to the state of Washington and he has been duly appointed State Health Officer as of June 1, 1933. Coffey was born in Kansas City, Mo., in 1896, graduated from the Kansas University Medical School in 1923. During his several years with the Service, he was assigned to the Office of Domestic Quarantine, in connection with administration of rural cooperative health work.

Governor Herbert H. Lehman, New York State, Says:

"It is not my intention to make any cut in the state health work in the coming budget to be submitted at the next session of the Legislature unless things become materially worse." He recalls that although the 1933-34 state budget was cut sixty million dollars, there has been no serious cut in the services rendered by the State Department of Health. He further states: "Somber as has been the life of huge numbers undergoing poverty and hardship, it would have been substantially greater had it not been for the work which the public authorities and voluntary agencies working together have accomplished."

Are You Spreading Yourself too Thin?

Dr. Homer Folks, Secretary of the State Charities Aid Association of New York, expresses the fear that many public health authorities are spreading their meager budgets and small staffs over so many problems as to be ineffectual in most of them and are becoming accustomed to a larger volume of talk than of achievement. "The basic purpose of public health administration should be kept constantly in mind," he said, "namely, the prevention of unnecessary disease. The purposes should be few and plain. They should be things which can be done and which will lead to the satisfaction of success and the prestige and public confidence which flow from definite accomplishments."

Personnel Is Important

The progress of public health work will depend in a large measure upon the type of personnel selected for such service and this will also be an important factor in stabilizing public health organizations. There has been remarkable development within the past decade or so in providing facilities for public health work, but the facilities for training health personnel have not been made available in different sections of the country so that those who may wish to enter upon public health as a career can gain the instruction and practical experience which is needed. This is a need that should be supplied.

LIBRARY NOTES

"A Library Is a Summons to Scholarship"

On September 5, Miss Helen Bonfils donated a set of pharmacy pots, mortar, and pestle to the Society in memory of the late Mr. F. G. Bonfils. This set consists of six blue and white Delft ware drug pots, a solid bronze mortar and a double headed pestle. The set was procured from a Hollander who had to dispose of it because of financial reverses. An affidavit accompanying the set attested to its being in this man's family four generations. It was in actual use by his grandfather and great-grandfather, who were pharmacists. The bronze mortar is beautifully decorated and finished. It has a band running around the top bearing the inscription "Lof Godt val Al" or "Praise God Above All," and "Anno 1639." The pots have handles and spouts and blue name plates, each labeled differently, and the translation of these labels reveals a list of concoctions which formed a part at least of the stock in trade of the pharmacist and physician of the 17th Century.

In speaking of the pharmacy pots, an authority on pottery had this to say, "These are, undoubtedly, Delft ware of Dutch origin. I think they were made in the 16th or possibly the 15th century as they are probably older than the mortar which is dated 1639. As examples of pottery they are a beautiful collection—the glaze is wonderful and the blue decorations are perfect."

Numerous letters were received from various Eastern and Mid-Western medical centers concerning this set. Several requested photographs and further details to compare our set with similar ones in the East. We know there are other drug pots over the country, and have heard that Squibb has some on exhibition at the World's Fair, but we do not know of another set exactly like this one in this country, although there is one in London.

Translation of the labels on the pharmacy pots follows:

1. ^S CYDONIORUM
SYRUP OF QUINCES.
2. ^S DE-SUCCO-ACETOSAE
OXYMEL OF JUICE OF RUMEX ACETOSE.
3. ^S OXIMIL SIMPLE
SIMPLE OXYMEL
4. ^S DE PRASSIO
SYRUP OF WHITE HOREHOUND.
5. ^S DE IUIUBUS
SYRUP OF JUJUBE.

These translations were supplied through correspondence with Dr. LaWall of Philadelphia. I wish to enclose a copy of one of his letters because of its interesting information, and because it shows the interest and kindness of those to whom we wrote for help in gaining information concerning these articles. We deeply appreciate Dr. LaWall's help.

Dear Dr. Philpott:

Since writing to you yesterday, I have found the answer to the label which I can now translate. The reason for not being able to translate before was a case of misspelling, which often occurs in connection with these old labels:

The following unabbreviated title of the label is:

OXY SACCHARUM VOMITARIUM

which was a medicated preparation made by dissolving vitriolated antimony in white wine vinegar, adding sugar, and boiling down to a syrup.

That clears up the old situation, as far as your jars are concerned, and you can use this information as an example of the unreliability of the ancient labels, for I have several times previously encountered similar situations.

Very sincerely yours,

CHARLES H. LA WALL,

Dean of Pharmacy, Philadelphia College of Pharmacy and Science.

It is hoped that this gift and the program of its presentation may stimulate others to present fitting gifts for our medical museum and library. It is time our institutions in the West began to build and encourage museums. The East is full of traditional and historical reminders of its past. The West should also conserve such objects and not allow them all to be shipped to Eastern centers. We can do this without sacrificing any of our attention or efforts toward existing in an active and virile present. We maintain a very modern, efficient, up to the minute library, we also have now a nucleus about which to build a museum that will be a credit to our Society and without which Denver, in the broad sense, cannot become a complete medical center.

O. S. PHILPOTT, Secretary.

BOOK REVIEWS

Principles and Practice of Obstetrics. By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics and Gynecology at the University of Chicago; Chief of Obstetrics, Chicago Lying-In Hospital and Dispensary; Consulting Obstetrician to Provident Hospital, to the Chicago Maternity Center, etc. Sixth Edition, Thoroughly Revised. 1165 pages with 1221 illustrations on 923 figures, 265 of them in colors. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, \$12.00 net.

As formerly, that Master in the Art of Obstetrics has again given to the medical student, general practitioner and specialist in his Sixth Edition of the *Principles and Practice of Obstetrics*, a book second to none in its completeness, clearness, and dependability. In the preface, Dr. DeLee has mentioned, in this latest edition, the newer and more salient points which include detailed information of advances in the science of obstetrics; the art, regarding the practical application of obstetric principles, remains much the same as in previous editions. Mentioning briefly a few of the additions includes a full description of the Aschheim-Zondek pregnancy test, a new set of illustrations for the repair of perineal tears and episiotomy, local anesthesia, and the newer narcotics of the barbituric acid group. The chapter on Contracted Pelvis deal especially with Nature's method of overcoming mechanical difficulties, and only the treatment has been changed to harmonize with the latest scientific practice. Borderlands of gestation and internal medicine are given prominence and the subjects of tuberculosis, diabetes, heart disease, and syphilis have been rewritten and brought up to date. The chapter on Embryology and Physiology of the Fetus has been revised. An appendix has been added giving a brief chronology of obstetrics. In a few minutes one can thereby obtain a broad retrospect and clear understanding into the history of the art. The Treatment of "Eclampsia" has been rewritten—this newer term suggested to define that unknown state of the constitution in late pregnancy, produced by physicochemical changes in the blood (or causing them), in which state the woman is liable to convulsions or coma.

The general subject matter is divided into four parts: (a) The Physiology of Pregnancy, Labor and Puerperium, a clear concise and every instructive treatise on that branch of obstetrics so easily brushed aside as unnecessary to a busy obstetrician; (b) The Conduct of Pregnancy, Labor and the Puerperium is a masterful handling of the subject (c) The Pathology of Pregnancy, Labor and the Puerperium, is possibly the most important and value part of the book to the practitioner; and (d) Operative Obstetrics, which deals carefully and fully and in the author's inimitable manner with that spectacular phase of obstetric practice, the various operative sections, showing in detail the low cervical method.

To sum up briefly and to give to one of America's outstanding obstetricians the credit and unstinted due which is Dr. DeLee's reward for a lifetime spent in struggling with the subject of maternity, this Sixth Edition is indeed all that could be desired within the 1200 odd pages which comprise its contents, and the profession should feel grateful to the author for his painstaking ef-

forts in giving to student, general practitioner and specialist such a dependable and excellent compendium of his prolific experience and knowledge of the art. Not to possess and read DeLee's is not to be obstetrically conscious.

RANULPH HUDSTON.

Medicine Among the American Indians. By Eric Stone, M.D., Providence, R. I. No. VII of *Clio Medica*, a series of primers on the history of medicine, edited by E. R. Krumbhear, M.D. New York: Paul B. Hoeber, Inc. 1932. 139 pages. Price, \$1.50.

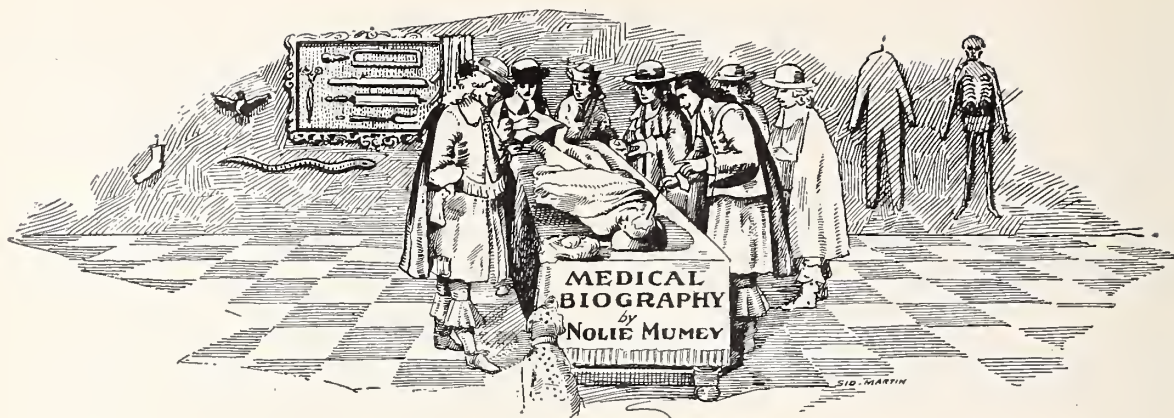
This delightful little volume, pocket size, affords a few hours of fascinating reading. It is the seventh of a series of similar volumes of which nearly a score more are in preparation, each by a recognized authority in his field.

Medical practice among American aborigines was rife with supernatural therapeutics, but also many of the procedures were based on sound facts. One is occasionally struck by the wisdom of some of the practices. For example, immunity was obtained against snake bite by wilfully permitting periodic biting by the reptiles, first by the very young, then by those progressively older until the sting of the mature adult was borne with impunity. The care and results in fractures and dislocations were phenomenal. Wet rawhide properly molded, dried into casts comparable with our best plaster. Obstetrical management was crude but fundamentally rational. Crede's maneuver was used at least one hundred years before so named. The merits of cleanliness were somehow appreciated. Strange enough, maternal and infant mortality was almost nil—though none will attempt comparison of the squaw and modern womanhood. Certain surgical procedures with crude instruments were attempted and not rarely successful. Some tribes were masters of traumatic surgery. Medical methods of the tribal medicine men were infinitely superior for the Indians than those later instituted by the whites.

As one reviews the apparently successful "magic" of the clever medicine men, their hokus pokus, incantations and dances, their great appeal to the confidence of the subjects, one does not marvel quite so much at results seemingly obtained at times by the modern charlatan—human nature remaining fundamentally unchanged.

Functional Disorders of the Large Intestine and their Treatment. By Jacob Buckstein, M.D., Instructor in Gastrointestinal Roentgenology, Cornell University Medical College; Alimentary Tract Division, Roentgen Department, Bellevue Hospital; Consultant in Gastroenterology, U. S. Veterans' Bureau, Central Islip and Rockaway Beach Hospitals; Associate Attending Gastroenterologist, Sydenham Hospital, New York City. Pp. 265, with 100 illustrations. Fabrikoid. Price, \$3.00. Harper's Medical Monographs. Harper & Bros., New York City.

A careful study of common functional disturbances of the colon, their causes and treatment, particularly suited to the needs of the general practitioner, whose practice contains many patients suffering from these diseases, who can be helped only by expert and efficient treatment. Dr. Buckstein's unusually wide and varied experience in gastroenterology includes more than 30,000 instances of these conditions at Bellevue Hospital alone. This volume, a result of these experiences, is enriched with many illustrations of roentgenologic studies.



SILAS WEIR MITCHELL

(Continued from September Issue)

The literary contributions of S. Weir Mitchell were by no means restricted to prose fiction. He also ranks as one of the foremost poets of the nineteenth century, and holds the distinction of being one of the few prose writers who was also a master poet.

As a child he grew up in an atmosphere of books, which included many of the poets of the eighteenth century. Love of poetry and sympathy with the poets were distinctive traits of the Mitchell family. The fact that he cared little for the poetry of Pope or Akenside turned him away from that type of verse. This did not, however, cause him to lose interest in this form of literature. The Mitchell family enjoyed the presence of 2,000 volumes about the dining room; these provided an academic atmosphere for the children during meal time. They knew a limitless amount of poetry and were able to quote verse on almost any occasion. Often they would attack their father's antique taste by quoting from recent writers; for example, on one occasion Weir Mitchell quoted Tennyson's "New Year."

With such a background it is not surprising that he developed into an imaginative and accomplished poet, whose verses show a rare distinction of style. When Weir Mitchell was 27 years of age, he sent a manuscript of verse to Tichnor and Fields, which they referred to Oliver Wendell Holmes. The latter advised him to establish himself in medicine before attempting to devote much time to literature. Dr. Mitchell evidently took this advice quite seriously,

because the great bulk of his literary work was not published until he had well established his reputation as a physician. Among his early verses were three anonymous poems: "The Strassburgh Clock," "Kear-sage" and "How the Cumberland Went Down." He has written poems of lasting quality filled with beauty and vivid descriptions. Owen Wister said, "Yet in poetry his best is to be found: it holds company with the best of our American muse." Mitchell's "Ode on a Lycian Tomb" has been spoken of as one of the few great elegiac poems in English. He was inspired to write it by seeing a monument "Les Pleureuses" in a museum at Constantinople. It represents the figure of a woman in different attitudes of grief. She is shown in eighteen compartments which occupy four sides of the monument:

ODE ON A LYCIAN TOMB

What gracious nunnery of grief is here!

One woman garbed in sorrow's every mood;
Each sad presentment celled apart, in fear

Lest that herself upon herself intrude
And break some tender dream of sorrow's day,
Here cloistered lonely, set in marble gray.

Oh, pale procession of immortal love

Forever married to immortal grief!

All life's high-passioned sorrow far above,

Past help of time's compassionate relief:
These changeless stones are treasuries of regret
And mock the term by time for sorrow set.

Ah, me! What tired hearts have hither come

To weep with thee, and give thy grief a voice;
And such as have not added to life's sum

The count of loss, they who do still rejoice
In love which time yet leaveth unassailed,
Here tremble, by prophetic sadness paled.

Thou who hast wept for many, weep for me,

For surely I, who deepest grief have known,
Share thy stilled sadness, which must ever be

Too changeless, and unending like my own,
Since thine is woe that knows not time's release,
And sorrow that can never compass peace.

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

Statutory Regulation of Infant Adoption

JUDGE STANLEY JOHNSON of the Juvenile Court, has addressed a letter to the medical profession relative to the placement of children for adoption. There has been some confusion through placements, by agencies, hospitals and physicians, of infants with prospective adoptive parents. In order that physicians may conform to the State Statute, we quote the following from Judge Johnson's communication (quotation marks enclose selections from the Statute):

"Any place into which women are received to be cared for, before, during or while recovering from parturition, shall be considered a maternity hospital. A 'Maternity hospital . . . shall be construed to include (a) maternity hospitals; (b) a department, ward or section for maternity cases; (c) a private home or other place making a business of receiving maternity cases.' The definition also includes 'any place where more than three maternity cases are cared for during one calendar year.'

"Maternity hospitals, before accepting such prospective mothers for confinement, shall inform them that they will be required to nurse the child during the period of confinement in said maternity homes, if physically able to do so. Exception to this rule will be made only on the certification of the attending physician that the mother is physically unable to nurse her baby.

"No person . . . shall advertise, undertake or promise that he will adopt any child or children received or born in any such hospital, nor shall he hold out any promise, reward or inducement to any parent to part with any such child or children. Nor shall any such child be given away by any parent or parents OR IN ANY MANNER GIVEN OUT FOR ADOPTION except through the agency and with the consent of the Board of Control of the State Home for Dependent and Neglected Children."

The act also provides that the name of any pregnant woman received, or of an unmarried woman received within ten days after delivery of a child, shall be immediately reported to the Colorado State Board of Health.

A penalty of from \$100.00 to \$300.00 is imposed, including the revocation of license, for violation of any of the provisions of this act.

In every case where an illegitimate child is born in a maternity hospital, the placing out of such child with any family desiring to adopt it is expressly prohibited. Nevertheless, there have been a number of cases of such placements without the required commitment to the State Home.

There are cases, of course, where hospitals, physicians or other persons may desire to place

such infants, either legitimate or illegitimate, in the care of a particular social agency in order that an effort may be made to persuade the mother or father or relatives to assume their duties toward the child. On the other hand, if the child is kept by such agencies for an indefinite period of time and failure results from the attempt to reconstruct the family relationship, the child may pass the age when it is desirable for adoption by selected families.

Where illegitimate children are abandoned in the hospital by their mothers, the law requires that, before any act leading to the adoption of the child, or the placing out of such child for adoption, shall take place, that the child shall be turned over to the Juvenile Court of Denver for commitment to the State Home which alone has the power to consent to its adoption.

At a recent meeting of several agencies interested in the care of children, it was agreed that no illegitimate child, thus abandoned, should be cared for without commitment to the State Home for a period exceeding two months after abandonment by its mother. This period was considered sufficient for investigation to discover relatives who might desire to care for the child. It was agreed that a male child, which has passed the age of three years, and a female child, which has passed the age of four years, is less desirable for adoption by families who have applied at the State Home, and therefore, the care of any child beyond the age of three years is seriously prejudicing its welfare.

In the case of legitimate children, a period longer than two months is desirable in which to attempt the reconstruction of family relationships, but it was agreed upon that in ordinary cases the child should not be cared for longer than one year unless, during that time, the parents have shown strong inclination and the ability to care for the child.

The purpose of this notice is to inform hospitals and physicians of the law upon this subject in Colorado, and to urge them in every case where a child is born out of wedlock and the mother desires to relinquish it for adoption, to notify Miss Golin, probation officer of the Juvenile Court in charge of such cases, that such child is held at the hospital. Please note that any placement of such a child for adoption, whether abandoned or not, is in direct violation of the statute. Families, desiring to adopt such children, should be referred to the State Home for Dependent Children on Iliff Avenue, Denver, where they may file their application.

In cases where it is felt by hospital authorities or physicians that such children should be placed with the Children's Aid Society or with the Catholic Charities, Jewish Aid Association or other organization maintained for the care of children, nevertheless notice should be at once given to Miss Golin at the Juvenile Court that such placement has been made with the agency.

In the case of children born to married parents, similar notice should be given to the Court for the reason that petitions for the adoption of such children must be made to the Juvenile Court or

one of the County Courts of Colorado and will result in an investigation by the court into the qualifications of prospective parents. Some confusion has resulted and several unfortunate cases have arisen through the indiscriminate placement of children, both legitimate and illegitimate, without notice to some central authority competent to pass on the question of adoption.

Commitment to the State Home can be had in Denver only through a petition in dependency in the Juvenile Court, and in the other counties, in the respective county courts.

MEDICAL SOCIETIES

DENVER COUNTY

There were eighty-three members present at the first September meeting of the Medical Society of the City and County of Denver, held in the Auditorium of the Capitol Life Building, September 5.

The presentation of the Bonfils gift, discussed elsewhere in this issue, was the feature of the evening.

Dr. E. L. Eliason, Professor of Clinical Surgery at the University of Pennsylvania, gave an excellent paper on "Fracture Wrecks and How We May Prevent Them." His paper was accompanied by a series of slides demonstrating various causes.

Light refreshments were served after the meeting by the Republic Drug Company.

The second regular September meeting was held at the Denver General Hospital September 19. The program for this meeting was presented by the staff of the Hospital.

Drs. Eastlake, Swerdfefer, and Nielson presented a paper on "Lung Abscess."

Drs. Sams and Daywitt presented a case of "Ruptured Peptic Ulcer," which was discussed by Drs. R. K. Dixon, Connor, Mumey, Love, Faust, and Dwyer.

"Syphilis of the Lung" was presented by Drs. Verploeg and McMillen, and discussed by Drs. Sams, Lincoln, and Hickey.

Drs. Daniels and Hellewell presented a paper on "Muscular Dystrophy-Scapulohumeral Type."

Eighty-three members were also present at this meeting.

O. S. PHILPOTT,
Secretary.

WOMAN'S AUXILIARY

The Auxiliary held a very successful meeting, considering the road conditions and the economic situation, in Colorado Springs, Sept. 15. There were nearly one hundred women present at the annual luncheon.

Mrs. Geo. P. Lingenfelter of Denver, who has been President-elect of the Woman's Auxiliary to the Colorado State Medical Society, assumed the presidency of that organization. She succeeds Mrs. B. F. Blotz of Rocky Ford.

Members of the society chose Mrs. J. W. Ames, Denver, as president-elect to succeed Mrs. Lingenfelter a year hence. Other officers elected were: Mrs. G. B. Webb, Colorado Springs, First Vice President; Mrs. B. Woodcock, Greeley, Second Vice President; Mrs. W. K. Reed, Boulder,

Third Vice President; Mrs. C. W. Streamer, Pueblo, Fourth Vice President; Mrs. J. Frederic Prinz, Denver, Recording Secretary; Mrs. J. E. Hutchinson, Denver, Corresponding Secretary; Mrs. Philip Work, Denver, Treasurer; Mrs. F. Dewey Bishop, Denver, Auditor; Mrs. W. A. Kickland, Fort Collins Parliamentarian.

Standing Committees

Mrs. G. H. Gillen, Chairman, Organization; Mrs. W. A. Ohmart, Chairman, Publicity; Mrs. Robert Maul, Chairman, Education and Public Relations; Mrs. Ralph Danielson, Chairman, Hygeia; Mrs. D. W. Macomber, Chairman, Year Book; Mrs. F. P. Gengenbach, Chairman, Legislative; Mrs. T. M. Burns, Chairman, Philanthropic and Benevolent Fund; Mrs. J. B. Crouch, Colorado Springs, Chairman, Social.

At the meeting of the Auxiliary it was voted to start a Benevolent Fund for the indigent widows and dependents of physicians. Such a plan is now in very successful operation in Pennsylvania and other states.

The Auxiliary also voted to sponsor the Colorado Tuberculosis Association's radio contest to be held later in the year.

One of the outstanding slogans brought home by our members who attended the National meeting in Milwaukee in June, is that all the Auxiliaries are to keep their membership intact and not drop any members on account of inability to pay dues. (All County Officers kindly take notice). A resolution was adopted at the State Auxiliary meeting to the above effect.

SEPTEMBER MEETING OF THE DENVER MEDICAL AUXILIARY

Mrs. John A. McCaw and Board of the Women's Auxiliary to the Denver County Medical Society gave a charming tea at the home of Mrs. John A. McCaw, in Cherry Hills, on September 18. Over one hundred guests called.

Bills that are not itemized often create resentment in the minds of patients and frequently raise the question as to the validity of the charges made for services. These two factors mitigate against prompt payment of the account in question and are responsible in no small measure for disagreements between patient and doctor.—Bulletin of Wayne County (Detroit, Mich.) Med. Soc.

Perhaps the machine can make us all sons of rest but it hasn't done it yet, by a considerable sight! The present "strange interlude" was not caused by substitution of machines for men, but by a world-wide epidemic of dementia praecox characterized by delusions of grandeur in which a distorted concept of values was used for money. It takes time to convalesce. Let the Technocrats give the Democrats a chance. Wait your turn. Get in line.—Clients' Service Bulletin.

Colorado State Medical Society Officers, 1933-1934

President: Gerald B. Webb, Colorado Springs.
President-elect: N. A. Madler, Greeley.
Vice Presidents: First, Frank E. Rogers, Denver; Second, A. G. Taylor, Grand Junction; Third, C. E. Sidwell, Longmont; Fourth, Ward C. Fenton, Rocky Ford.
Constitutional Secretary: John S. Bouslog, Denver.
Treasurer: Leo W. Bortree, Colorado Springs.
 (The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone, KEystone 0870.

Delegates to American Medical Association: Senior, John W. Ames, Denver; Alternate, A. J. Markley, Denver; Junior, Crum Epler, Pueblo; Alternate, John B. Crouch, Colorado Springs.

Councillors: *Term Expires*
 District No. 1 F. W. Lockwood, Fort Morgan.....1936
 District No. 2 Ella A. Mead, Greeley.....1936
 District No. 3 George P. Lingenfelter, Denver.....1936
 District No. 4 C. T. Knuckey, Lamar.....1935
 District No. 5 George D. Andrews, Walsenburg.....1935
 District No. 6 C. Rex Fuller, Salida.....1935
 District No. 7 A. L. Burnett, Durango.....1934
 District No. 8 Lee Bast, Delta.....1934
 District No. 9 W. W. Crook, Glenwood Springs,
 Chairman.....1934

Standing Committees, 1933-1934

Credentials: John S. Bouslog, Denver, Chairman; Harold T. Low, Pueblo; John A. Sevier, Colorado Springs.

Scientific Work: Kenneth D. A. Allen, Denver, Chairman; Burgett Woodcock, Greeley; G. Burton Gilbert, Colorado Springs.

Arrangements: John B. Hartwell, Colorado Springs, Chairman; William A. Campbell, Jr., Colorado Springs; Carl S. Gydesen, Colorado Springs.

Public Policy: Charles O. Giese, Colorado Springs, Chairman; Walter W. King, Denver, Vice Chairman; H. R. McKeen, Denver; Gerrit Heusinkveld, Denver; Harvey W. Snyder, Denver; James J. Waring, Denver; Lanning E. Likes, Lamar; W. W. Harmer, Greeley; Charles H. Platz, Fort Collins; Gerald B. Webb, Colorado Springs, ex-officio; John S. Bouslog, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

Publication: C. S. Bluemel, Denver (1934); William H. Crisp, Denver (1935); C. F. Kemper, Denver (1936).

Medical Defense: Casper F. Hegner, Denver (1934); T. D. Cunningham, Denver (1935); Frank B. Stephenson, Denver (1936).

Medical Education and Hospitals: J. A. Sevier, Colorado Springs, Chairman; Royal H. Finney, Pueblo; Thad P. Sears, Denver.

Library and Medical Literature: George A. Boyd, Colorado Springs, Chairman; E. D. Downing, Denver; F. W. Kenney, Denver.

Cooperation with Allied Professions: M. O. Shivers, Colorado Springs, Chairman; H. S. Finney, Denver; John R. Evans, Denver.

Medical Economics: Claude E. Cooper, Denver, Chairman; Philip Hillkowitz, Denver; F. Julian Maier, Denver.

Necrology: George M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; C. W. Streamer, Pueblo.

Special Committees, 1933-1934

Postgraduate Clinics: C. E. Harris, Woodmen, Chairman; Maurice H. Rees, Denver; Nolie Mumey, Denver; O. M. Gilbert, Boulder; Fred M. Heller, Pueblo.

Military Affairs: George P. Lingenfelter, Denver,

Chairman; John W. Ames, Denver; Robert M. Fulwider, Fort Lyon; Louis V. Sams, Denver; W. P. McCrossin, Colorado Springs.

Advisory to the School of Medicine: Frank B. Stephenson, Denver, Chairman; John S. Bouslog, Denver; T. D. Cunningham, Denver; C. E. Sidwell, Longmont; Charles O. Giese, Colorado Springs.

Cancer Education: Lyman W. Mason, Denver (1936), Chairman; Charles T. Ryder, Colorado Springs (1936); John B. Hartwell, Colorado Springs (1936); C. W. Maynard, Pueblo (1935); W. W. Wasson, Denver (1935); H. S. Finney, Denver (1935); William H. Halley, Denver (1934); K. D. A. Allen, Denver (1934); W. W. Haggart, Denver (1934).

Nursing Education: Frank E. Rogers, Denver, Chairman; H. A. Black, Pueblo; C. T. Knuckey, Lamar.

Cooperation with Board of Health: E. N. Chapman, Colorado Springs, Chairman; John W. Ames, Denver; Margaret Long, Denver.

Workmen's Compensation Affairs: Peter O. Hanford, Colorado Springs, Chairman; A. S. Cecchini, Denver; J. B. Farley, Pueblo.

Constituent Societies Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Crysler, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, C. Rex Fuller, Salida.

Crowley County—Second Wednesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, W. W. Evans, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, G. M. Noonan, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—Third Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Thursday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

President, F. L. Beck, Cheyenne

Vice President, J. L. Wicks, Evanston

President-elect, H. L. Harvey, Casper

Secretary, Earl Whedon, Sheridan

Treasurer, Evald Olson, Meeteetse

Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne

Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas

Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

The Southwestern Wyoming Medical Society

IN THE News Item column will be found a report of the organization of the Southwestern Wyoming Medical Society, as reported by The Wyoming Journal of Rock Springs in its August 29 issue.

We believe this to be a move in the right direction. In the American Medical Association exhibits in A Century of Progress, at Chicago, is a map of the United States showing how completely each state has organized County Medical Societies. Of the Middle and Western states, Iowa stands out the most perfect example of successful organization. Others look like an epidemic of smallpox had struck them—here and there an organized spot, the rest not organized.

That this map is not correct is true. The reason is that all state secretaries have not kept the officers of the American Medical Association informed as to the organization in their states of the County Medical Societies.

The grouping together of five Southwestern counties is a fine move. It means an organization more alive and affords a medical home for several doctors who, by reason of their small number and location in each of these sparsely settled counties, could not maintain a live County Medical Society.

Again we say, it's a fine move and an application should be made for a charter to make this organization a real part of the Wyoming State Medical Society. We believe this move should continue until Wyoming is divided up into five, six, or seven district societies and the county society abandoned.

This is not radical or against the organization of the American Medical Association, but just as the depression has made the N. R. A. necessary, we believe it has required a closer working force of all the doctors in each state to become active members in the state and national organization of the American Medical Association. This plan has worked out in a successful way in the Northwestern Wyoming Medical Society, and it will work just as well in all parts of Wyoming.

More doctors will join and our organization will become stronger. Meetings can be held in the different counties, which ought to mean better papers, plans and discussions. The columns of our part of Colorado Medicine will welcome papers and reports for publication, and all encouragement possible will be given in the organization of those district societies in Wyoming.

• • •

Hang Them Up

MANY men hang up their pants on the floor. We are told that some women do, but we know some of them do not. When it comes to the uses and abuses of glasses, there is just the same difference in the treatment they receive. That glasses are greatly abused by the average owner all oculists know, but any correcting treatment would be an advantage to the glasses, themselves, and their owners.

Constructed of the best materials and with the finest polish, a large percentage of glasses are ruined in the first month of their use by misuse. If the oculists of America could teach the wearers how to take proper care of these beautiful polished lenses and

finely made frames, results would be far better and we would have happier patients. Let us assume ophthalmologists have scientifically examined the eyes and prescribed the proper glasses, that the manufacturing opticians have given their greatest skill and have used the finest materials. The fit is perfect, the product is the finest—what happens then? Most patients are given the glasses with little or no instructions how to take care of them.

The result is a pair of beautiful lenses scratched and all out of alignment in just a few days. These errors can and should be avoided. The patient should be instructed before the damage occurs. Can this be done? Certainly. To begin with, teach the new owner what a beautiful job has been done by the ophthalmologist and the manufacturing optician. A perfect, beautiful, highly polished, delicately made instrument has been delivered to the owner. However, all its beauty and fine construction can be ruined in a few moments or days by carelessness.

First, teach that greatest care is necessary to preserve the beautiful polished surface. Avoid all scratching in cleaning the lenses. No forceful rubbing with rough or dusty cleaners or cloths. No strong soaps. We have repeatedly seen the finest lenses ruined by rough cleansing and by strong soaps. Avoid the use of silk handkerchiefs, as they are very dangerous. Cleanse either with some standard cleaning solution or warm water and dry with a clean, partly worn out linen or cotton handkerchief, avoiding all pressure on the lens surfaces.

Remember glasses require the greatest care in washing and drying. Don't rob them up and down—that bends the tiny guards at the edge of the lenses where the screws are put through, and the lenses become loose at the nose piece and at the temples.

The result is a pair of glasses all out of true alignment. A large percentage of lenses are especially ground with a greater or lesser additional curve in some one direction. These added curves are to correct certain irregularities in the structure of the eyes. If the glasses become loose and drop

down, the angle, or line of this curve, does not stay where it should and the good effects are lost, and indeed damage is done to the eyes by their use. So cleanse and keep your glasses tight if you want the best results from them. Never place glasses so the surface will touch anything except the cleanest of soft material. Never lay them on a table, shelf, dresser, or any other place where they can easily be scratched or broken. It only takes a book misplaced on top of a beautiful example of the craftsman's art to wreck them. Hang them up when you take them off! A picture frame or the edge of the mirror makes a safe place. Over the head of the bed is often handy, but don't shut them up and put them in a glass pocket case. "Bad medicine," as the Indians say. It scratches the lenses and works the screws loose in the frames. Hang them up from the start, and the habit thus easily formed will repay you in added comfortable service. It pays to hang them up—at least treat them as well as you treat your pants.

✦✦✦ WYOMING NEWS NOTES ✦✦✦

The following is reprinted, by permission, from the August 29, 1933, issue of the Wyoming Journal, daily newspaper of Rock Springs, Wyo.:

Representatives of the medical profession of southwestern Wyoming met in Rock Springs Saturday night to organize the Southwestern Wyoming Medical Association. The meeting was held in Howard's dining room, where representatives from Sweetwater, Lincoln, Uinta, Sublette and Teton counties met for a banquet at 7 p. m.

Dr. E. F. Scheidegger of Green River, President of the Sweetwater County Medical Society, presided at the meeting until the new association named a president.

Dr. Joseph Holland of Evanston was elected President of the new association; Dr. J. G. Wanner of Rock Springs, Secretary and Treasurer. A vice president for each of the five counties composing the district were named as follows:

Uinta, Dr. J. Jacoby of Evanston; Lincoln, Dr. A. A. Boston of Kemmerer; Teton, Dr. C. W. Huff of Jackson; Sublette, Dr. Montrose of Daniel. A vice president for Sweetwater county is yet to be named.

The newly-formed association will be a unit

of the Wyoming Medical Society. Its object is to give medical men of each county an opportunity to work in an organization that is affiliated with the state society. Some southwestern Wyoming counties are without medical associations because of the scarcity of medical men within the county. Counties now having their own societies may continue them if members wish to do so, it is understood.

The association will meet at various times at points within the five counties. The Uinta delegation extended the first invitation where doctors of the five counties will meet in Evanston September 30.

The following were present at the meeting here Saturday night:

Dr. Davis of Superior; Dr. J. F. Whalen and Dr. E. E. Scheidegger of Green River; Dr. R. C. Stratton of Lyman; Dr. Jacoby and Dr. Holland of Evanston; Dr. A. A. Boston of Kemmerer; Dr. Oliver Chambers, Dr. J. H. Goodnough, Dr. R. H. Sanders, Dr. E. S. Lauzer, Dr. Doyle Joslin, and Dr. J. G. Wanner of Rock Springs.

INTERNATIONAL ASSEMBLY OF THE INTER-STATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

Cleveland, Ohio, October 16, 17, 18, 19 and 20, 1933

The Inter-State Postgraduate Medical Association of North America extends a very cordial invitation to all physicians in good standing to attend the International Assembly of the Association, to be held in the city of Cleveland, Ohio, October 16 to 20, inclusive, 1933.

An unusually interesting clinical and didactic program including all branches of Medicine and Surgery and the Specialties, has been arranged by the Program Committee.

In co-operation with the Cleveland Academy of Medicine, the Cuyahoga County Medical Society, and the Ohio State Medical Society, and with the active support of the Cleveland Convention Bureau and Cleveland Chamber of Commerce, a most excellent opportunity for an intensive week of postgraduate medical instruction is offered by a very large group of acknowledged leaders in the profession.

WILLIAM J. MAYO, M.D.,
President.

GEORGE W. CRILE, M.D.,
Chairman, Program Committee.

WILLIAM B. PECK, M.D.,
Managing-Director.

TOM B. THROCKMORTON, M.D.,
Secretary.

ARTHUR G. SULLIVAN,
Director of Exhibits.

What It Costs to See the Fair

For \$16.65 an adult can see everything that is to be seen at A Century of Progress. This includes going into every pay conces-

sion and Midway amusement. Add to this a \$3 observation ride in a dirigible balloon, a \$3 airplane ride and a \$.50 boat tour of the lagoons and the total is \$23.15. A child under twelve years old can do the entire Fair, including all pay attractions, for \$12.05.

The gate admission of \$.50 for adults and \$.25 for children includes eighty-five exhibition buildings and features and eighty-two miles of exhibits.

This should put a final quietus on wild guesses as to what it costs to see the World's Fair.—Chicago Medical Society Bulletin.

Chart on Epidemiology of Psittacosis Available

The chart illustrating the epidemiology of psittacosis used by Professor Karl F. Meyer in his excellent paper on the heterogeneous infection chains at the Pasadena meeting is now available in reduced size for the several health officers who requested it and any others who may be interested. They can be obtained from the Hooper Foundation for Medical Research, University of California Medical School, San Francisco, at 25 cents each.

Preliminary 1933 Edition of Accident Facts

Preliminary reports to the National Safety Council indicate that about 88,000 persons were killed in accidents during 1932, compared with a total of 97,415 in 1931. Of these 88,000 persons, 29,500 were killed in automobile accidents, 18,000 in other public accidents, 28,000 in home, and 15,000 in industrial accidents.

The estimated death rate from accidents for last year was 70.5 per 100,000 population, compared with 78.5 in 1931. The 1932 rate was the lowest in the history of the United States except for the years 1921 and 1922, when the rates were 68.4 and 69.6 respectively. The total number of deaths was smaller than in any year since 1924, when 85,684 deaths occurred. It is the second time that total accidental deaths have dropped since 1921.—From American Journal of Public Health, June, 1933.

Colorado Medicine

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W. H. Crisp, M.D.
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EDITORIAL NOTES AND COMMENT

The Press Muddies the Waters

RECENTLY John H. Link of Eads, Colorado, was injured fatally just outside of Denver county. He was traveling on a tax-built highway. Theoretically at least, the taxpayers had provided this as a safe way of travel. The city press gave slight attention to the acts of the fiend, a "hit and run" driver, who converted a tax-built highway into an alley of death—so slight, indeed, as to amount to honorable mention. Conversely the Denver General Hospital came in for the sharpest type of criticism because, being a tax-supported institution, it advised that the injured man, not a resident of Denver, be taken to the Colorado General Hospital. Unfortunately the man died before he reached the latter institution. In all probability he would have died had first aid been provided earlier, but the event is still deplorable and is explained only by the fact that the Denver General Hospital is an organization of human beings, and therefore subject to making human mistakes. Is it too much to hope that the press of Denver match this by forgiveness?

One editor shakes the accusing finger not only at the Denver General Hospital, but at the physicians of Denver. Such implications as "assaying the patient" and the "go get a private physician racket" are as unfair and misleading as the English language is capable of expressing. So far as we are able to determine, this "racket" could more appropriately be called a "whisper." On the other hand the social influence which leads

people, otherwise competent, to seek medical aid at the hands of tax-supported institutions is too common and too pernicious to be passed over by gangland's easy term—a racket. To the average individual, tax-furnished medical care carries no stigma and is sought long before the community is asked to provide food and clothing. For this very reason tax-supported institutions are morally bound to limit admissions to those entitled to such care. Colorado General Hospital is a state institution created to offer medical service to the citizens of the state unable to provide ordinary care. Denver General Hospital is likewise provided for the poor of Denver. Until the city and state are able and willing to furnish medical care to *all* citizens, the taxpayers must insist that admissions be limited to those entitled to such services. Great as has been this unjust burden upon taxpayers in the past, there is now some evidence to lead us to believe that the recent leadership in misemphasis and confusion is making a bad matter worse. We deplore mistakes that sometimes occur. We expect first aid in all cases of serious injury regardless of eligibility. But, contrary to the daily press, we seek a spokesman for the taxpayer.

We also resent the implication that, by some sleight of hand, many Denver physicians "fatten" on the salaries or referred work from public institutions. Need enlightened leadership be retold that practically all of the medical service in these institutions is donated? Need it be told that the caduceus on the lintel is no protection against the assessor or community chest solicitor?

As citizens and taxpayers we will continue to "do our part." As members of a profession with a glorious heritage, we will continue to serve the poor of the city and state freely, faithfully, and gratuitously. To the taxpayer and the public we can confidently look for approval.

C. F. K.



Annual Secretaries and Editors' Conference

SECRETARIES of constituent state medical associations and editors of the state journals attended their annual conference in Chicago in September. This and the last previous meeting were in the Palmer House, the old assembly hall in the American Medical Association headquarters having been necessarily absorbed by offices, as our chief organization has outgrown its old home. This year's program was placed ahead of the customary November date that guests might be in Chicago before closing of the World's Fair. Forty of the forty-eight states were represented; five of the eight absentees were far western men who were unable to spare the required time.

The meeting was called to order by J. H. J. Upham, Chairman of the Board of Trustees of the American Medical Association. President Dean Lewis delivered the first paper, *The Quality of Medical Care*. F. C. Warnshuis discussed the findings of a committee, representing the Michigan State Medical Society, which has made a study of the type and distribution of medical service in that state. His constructive conclusions are based upon actual, not conjectural, facts and will be at least partially applicable in all states. The importance of scientific exhibits at state association meetings was brought out by E. A. Meyerding of St. Paul. President-elect Walter L. Bierring talked upon the dangers of the oversupply of physicians. The Illinois State Medical Society's Educational Committee has been active in contacting the public and lay organizations through health talks. The importance of these efforts in inculcating a more widespread health-consciousness is inestimable. This work was discussed by H. M. Camp. Postgraduate work in New York has been

made increasingly popular through the efforts of the State Medical Society's Committee on Public Health and Medical Education. Thomas P. Farmer, Syracuse, presented an important paper discussing the mechanism of these activities. Problems of medical defense, ethics and deportment—particularly apropos of the prevailing economic straits—were covered in the papers of J. E. Tuckerman, Cleveland, and C. W. Comfort, New Haven. Legislative problems, federal and state, were delineated by W. C. Woodward, Director of the Bureau of Legal Medicine and Legislation of the American Medical Association.

Needless to mention, the above supplies food for these editorial columns for months ahead. Their value will be enhanced by assimilating the topics singly. However, this number would be incomplete without unloading a few impressions of the World's Fair—indeed not the least attractive feature of this year's visit to Chicago.

Guests were particularly fortunate in being treated to a banquet, in the Trustees' Lounge on the Fair Grounds, by the Chicago Medical Society. For the majority, the initial introduction to the Fair was obtained on this occasion. The Lounge, architecture ultra-modern, permits a critical view in every direction through its nearly all-glass sides. Visitors agree that evening permits a thrilling general impression of the Fair. Electricity is playing a spectacular role from the aurora borealis at the south end of the grounds to the effortless elevators of the sky-ride towers at the north. Lighting and power are demonstrated at their acme. Hosts planned the program in anticipation of our impatience; it was in a light vein and brief.

When one attempts to tell of the Fair, pen slows, stops, and words fail. The occasional person to whom it is "just another Fair" must lead a somber life; we wonder what manner of display would please him. Some of these individuals undoubtedly have seen too little of the Fair and have misjudged it by some small portion. We begrudge no one the fascinations of the Midway. However, some may have overin-

dulged in personal study as to why Sally, the fan dancer, has been fined an evening's pay check plus sixty days in jail; also, what type of palsy could cause her fan to slip so agreeably. Or further, why did the judge and jury postpone the sentence a number of weeks—mathematical calculation indicates it begins safely past the closing day. Representatives from this territory cannot answer your questions. Immense crowds always got there first. Time was all too short. However, any queries about the Streets of Paris will be promptly cared for. Wyoming colleagues, kindly address your questionnaires to Dr. Earl Whedon, Sheridan!

By day, a liberal education is available for those whose feet and legs will carry them through miles of exhibits. Next best in facility, kind to the feet but relentless to pocketbook, is transportation via jinrikisha. Whatever it costs in comfort or money, the investment is sound. Therein is pabulum for years to come; we wonder when there could be the like of it again.

Medical men detect a prominent fact about the medical exhibits in the Hall of Science. They are well attended and provoke serious comment. The people hunger for knowledge of the human body. Unfortunately they have practically been denied it in the common education. We have only to substitute reliable medical information for the present commercial misinformation to create a boundless market for our wares. The public is already health conscious, but must swallow the quackery thrust down its throat. When human physiology is a required part of higher education, and the facts of health and disease are before the public eye, most of our professional ills will evanesce. There will then be no market for quackery and nostrums. Medical exhibits similar to these at the Fair should be a permanent department in every educational institution beyond the grades.

This was the year of years to be in Chicago. Absentees will never know what they missed. The Conference is always indispensable to complete service of secretaries and editors to their respective organizations.

This year's additional incentive must have created an impulse of lasting benefit in the field of medicine.



Essential Hypertension

RECENT years have evolved a more adequate classification of the types and stages of hypertension. The greatest progress in therapy apparently is of a negative sort. It consists in avoiding much of the trying and useless therapy which in the past has made the patients' lives miserable without benefitting the morbid condition.

Keith, Wagener, and Kernohan described the syndrome of "malignant hypertension" in the Archives of Internal Medicine in 1928. This disease runs a rapid course, about 90 per cent of cases terminating within two years. The patients develop inflammation and necrosis of the arterioles, seen best in the retina. Death results from renal or cardiac failure or from cerebral vascular events. Cases are reported in children and not rarely in young adults. In contradistinction to this striking pathology are the cases unaccompanied by arteriosclerosis or renal failure. Such have for years been identified as cases of "essential hypertension."

The familial tendency in this condition has long been recognized. A recent issue of the New England Journal of Medicine has presented such a study of arteriolar (essential) hypertension in three generations of a family. This Russian-Jewish family, described by Dr. David Ayman, consists of thirty-two members of blood relationship. One hundred per cent of the first, 80 per cent of the second, and 25 per cent of the third generation presented elevated blood pressures on repeated examinations. It was noted that most of the individuals were high-strung, quick tempered, and sensitive. The level of hypertension increased with age and was known to appear as a rule at least by the second decade of life. Edgar A. Hines, Jr., M.D., a Fellow of the Mayo Foundation, in a recent study of this syndrome, finds that 50 to 75 per cent of subjects give an undoubted family history

of cardiovascular renal disease. Records at Mayo's reveal the condition in 960 patients under the age of forty recognized in that institution between 1922 and 1927.

Without reviewing the many alleged etiologic factors in essential hypertension, suffice it to mention that practically every physical, chemical, and glandular aberration has at one time or another been incriminated. At the present time the majority of clinicians adhere to the neurogenic theory. We grant that the so-called normal blood pressure varies and reacts to various stimuli. The hypertensive individual may possess a hypersensitive vasomotor center. There is plenty as yet unknown as to the functions of the pressor zones in the carotid artery and aorta and of pressor hormones.

No drug is known which will cause any permanent lowering of blood pressure. Nitrites, bismuth subnitrate, potassium sulphocyanate, and sedatives have been tried thoroughly. Therefore general measures, particularly before organic changes become established, are indicated. Dr. Hines, above mentioned, cautions us particularly against prescribing long rest periods. They only inculcate a sense of invalidism; likewise frequent blood-pressure readings instill a blood-pressure consciousness. He denies the value of rigid diets. The patient should understand the nature of his trouble and the fact that he himself can control the pressure better than any physician. His life must be accommodated to his hyperirritable vasomotor system and his watchword be moderation in all things.



More About Samples

THE unscrupulous manufacturer has been generous with his samples for the sole purpose of using the doctor as a dispensing medium, gaining thereby his implicit endorsement. The ethical pharmaceutical house gives samples for a legitimate purpose—to acquaint the physician with the product. Finding it conveniently packaged and suitable for a given case, the doctor hands it out in its original container. He feels that it is a favor to the patient to give

him something he would otherwise have to buy.

The recipient of this favor later finds no difficulty in affording the market price of the product under its trade name. It is used for himself and others, possibly to the discredit of the physician. The doctor's "secret" is his, and on the drug store counter is later placed the fee. He has paid for the medicine but not for proper advice.



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THE FOOD FACTOR IN ALLERGY*

GEORGE PINESS, M.D., and HYMAN MILLER, M.D.
LOS ANGELES

It is a matter of common knowledge that foods may cause symptoms in allergic patients. This of course is due to the fact that foods are a source of foreign protein. Because of this, and because foreign proteins derived from foods often produce characteristic symptoms, there has arisen a school which discusses "Food Allergy" as a separate clinical syndrome. As a matter of fact "Food Allergy" should no more be considered a separate clinical syndrome than "Pollen Allergy" or "Hair Allergy" or "Face Powder Allergy." These terms merely designate a group or class of substance containing protein which may produce symptoms on contact with certain individuals of peculiar constitution. Whether the protein be derived from food, pollen, or hair does not alter the essential origin of these symptoms. The special problems of sensitivity to food proteins are problems which arise from the fact that food proteins are derived from foods and not that food proteins necessarily act differently than proteins derived from other sources.

Before taking up the problems in allergy which arise from food sensitivity, it might be well to classify the common symptoms which may be allergic in origin. Later we shall see how their diagnosis and treatment is influenced by food sensitivity.

CLASSIFICATION OF ALLERGY

Respiratory Tract	1. Allergic conjunctivitis—Vernal catarrh
	2. Hay fever— Acute (seasonal-perennial) Chronic Headaches (often accompanied by nasal polypi)
	3. Bronchial asthma
	4. Allergic bronchitis and pneumonia
Digestive Tract	1. Stomatitis (canker sores)
	2. Cyclic vomiting (possibly some types of pyloric stenosis)
	3. Allergic enteritis (colic, vomiting, diarrhea, constipation, mucous colitis, ulcerative colitis, dysentery)
	4. Pruritus ani

Skin

1. Pruritus
2. Urticaria (vesicular, purpuric, mucosa of respiratory tract, mucosa of digestive tract)
3. Allergic erythema
4. Allergic dermatitis (allergic eczema)

This classification quite evidently does not take into account the source of protein producing each symptom complex. We know that proteins derived from certain sources are apt to affect particular systems; that is, inhaled substances seem most apt to produce respiratory symptoms and ingested substances gastro-intestinal symptoms; yet the fact must not be lost sight of that the contrary is often true. For instance, by far the most common symptoms of allergy occur in the respiratory tract and less commonly in the gastro-intestinal tract. Yet since ninety-nine out of every hundred allergic patients are sensitive to foods it is quite likely that foods are more apt to produce a wheeze or a sneeze than a bellyache.

It is more important to make the diagnosis that allergy exists in the patient than to try to incriminate certain substances such as foods as the cause of particular symptoms. In food sensitivity as in any other sensitivity we have laid down the principle that the diagnosis of the allergic constitution should be made the primary consideration. The diagnosis of specific causes can logically follow on this.

The diagnosis of the allergic constitution is made from the history and physical findings. The details of this need not be here discussed except to point out that a positive family history of allergy, and any of the symptom complexes listed in the classification given, are presumptive evidence in favor of allergy. There are certain pitfalls which here should be considered. Not all gastro-intestinal disturbances in patients suffering from asthma are allergic in origin. On the other hand, vague gastro-intestinal symptoms associated with asthma should not be overlooked as possibly of allergic origin.

Having satisfied one's self of the allergic nature of the patient's symptoms, the role

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that food plays in the production of these symptoms, whether involving the respiratory tract, the gastro-intestinal tract or the skin, may to a large extent also be determined from the history. Here again a careful judgment must be exercised in weighing the evidence. Most stories of idiosyncrasies to foods as given by the patients should be ignored. Too often they are influenced by the lurid and entrancing pseudo-logic of the newspaper food faddist. After having heard of "acid-forming foods," "mucus-forming foods," "unfired foods," etc., ad nauseam, we now feel that the only reliable indication of a relationship between the ingestion of certain foods and the production of symptoms is that which sometimes occurs in infants where there is violent swelling of the lips and tongue and vomiting, and in the observation that children frequently but not invariably dislike foods to which they are sensitive.

On the other hand, the observation that food sensitivity has a predilection for particular organs such as the skin and gastro-intestinal tract makes it possible to draw valuable conclusions from the personal history. Most infantile eczema is due to foods; therefore a history of this disturbance is good evidence of food sensitivity. Unfortunately this relationship has been overemphasized and our experience leads us to believe that many failures in the treatment of infantile eczema are due to the fact, often lost sight of, that contact dermatitis in infancy is not at all uncommon. The same holds true for the relationship of foods to gastro-intestinal allergy. Most allergic gastro-intestinal symptoms are due to food sensitivity, but gastro-intestinal allergy cannot be considered wholly synonymous with what has been labeled an entity called "Food Allergy." In an allergic person, gastro-intestinal disturbances, as has been said, may result from any source of protein which enters the body.

A story of seasonal incidence of symptoms does not rule out food as a factor in the production of symptoms. Certain foods are seasonal and produce symptoms only at the time of year when eaten. On the other hand, sensitivity to non-seasonal foods may

not produce symptoms so long as the total dose of protein lies below the patient's threshold of tolerance. However, during the pollen season when the total dose of protein rises beyond the patient's threshold, regardless of whether that total dose be derived from foods, pollens, or animal hairs, the patient may have symptoms. Such symptoms of course will be most apt to occur when the pollinating season is on and the total dose of protein is high. Keeping in mind these quirks which sensitivity to foods may give the story of allergy, a clinical history may be obtained which not only gives valuable clues in diagnosis, but also valuable help in treatment.

With the history completed we may now logically seek what aid to diagnosis may be offered by skin testing. The belief in the efficacy of skin tests to proteins as an indication of clinical sensitivity is based on the observation frequently confirmed that positive reactions usually mean clinical susceptibility¹. In other words, the skin is sensitive when the inner organs are sensitive and to the same substances. There are of course some exceptions to this which will be discussed later. At present it is sufficient to say that these exceptions are responsible for much of the incredulity with which the allergist has been faced and for many of the ephemeral theories of which allergists have been guilty. For the present the principle is laid down that the skin test is the best indicator we have for determining what proteins produce symptoms in allergic individuals².

Unlike many other tests in medicine, protein skin tests cannot be delegated to the mercies of a technician. This will be quite obvious when we have completed our discussion of the principles that must be adhered to in properly doing skin tests. The first of these principles is based on the common sense idea that unless a patient is tested to every possible source of protein he has not been completely tested; conclusions drawn from such incomplete tests will frequently be erroneous. It is for this reason that we consider food tests as only one part of the total group of substances which must be tested, and also for this reason we do not

consider food tests as the most important part. Foods are not more important than pollens and pollens are not more important than animal hairs in the causation of symptoms in allergic individuals. All or any of these may produce symptoms and only a complete skin test will give a proper basis for drawing proper conclusions. Not only does the statement as regards the relative importance of the various sources of protein hold good in the general field of allergy, but also in the particular field of abdominal allergy which has been misnamed "Food Allergy."³ Again we must reiterate that symptoms of abdominal allergy may come from any source of protein whether it be ingested, inhaled, or injected, although usually due to food.

It is of course obvious that the technic of testing must be that which is most successful in the hands of the particular operator. In our own work we rely almost entirely on the scratch and the intradermal methods. The scratch is always used first in order to avoid the possibility of producing constitutional reactions in the very sensitive individuals. If satisfactory reactions are obtained by the scratch method we find it unnecessary to use the intradermal method. If, however, scratch testing does not give satisfactory reactions we then turn to the intradermal method which in our hands has proved safe and reliable.

Granted that the method used is the best for the particular operator, there are certain requirements in technic which all operators must meet. The first of these is that there must be absolutely no doubt as to the activity of the testing proteins used. It is best to prepare one's own materials and this is our practice, since having found from experience that materials from other sources are not reliable. Another requirement is experience in reading reactions. This is extremely important for their correct interpretation. It must be remembered that textbook descriptions of what a reaction should look like frequently do not fit the picture found in actual practice. In one individual a certain degree of erythema indicates a positive reaction; in another, erythema is

not sufficient and a wheal must accompany the erythema. In still another neither the wheal nor the erythema means a positive reaction without the presence of pseudopods on the wheal. It is almost impossible to put down in writing or to explain the many differences which may occur between positive and negative reactions for each individual. Many experiences in reading reactions will provide the only good method for determining these differences.

So far in the matter of skin tests we have considered the technic, the materials used, and the factor of interpretation by the clinician. We must also take into consideration another factor and that is the variability in reactivity of the skin of the patient under observation. Not infrequently the patient with allergy of definitely known etiology gives negative skin reactions. This is not necessarily a permanent state of affairs, and is merely due to the presence of a refractory condition, of which more will be said later. However, it must be pointed out that in view of the existence of such refractory periods it is necessary in the case of negative reactors to repeat the tests at such time as reactions are more likely to occur⁴.

The tests having been completed, interpretation of results must be based on not only what was actually found in the tests but on those points in the history with which they must be correlated. In other words, as has been before indicated, positive reactions do not necessarily indicate substances which invariably produce symptoms, and, conversely, negative reactions do not absolutely eliminate these substances as producing symptoms. The reasons for this state of affairs are not yet quite clear. Perhaps the most rational explanation for the lack of correlation between positive skin tests and clinical observation lies in the theory that the patient may react clinically not only to the specific substances alone, but to a total dosage made up of a number of specific proteins⁵. In other words, a patient may give skin reactions to several foods and the removal of any of these may not relieve the symptoms, but the removal of all does. This again has to do with the total protein

dose. Another factor which complicates interpretation of the skin reactions in terms of clinical improvement or trial is due to the presence of the refractory periods mentioned. These refractory periods may be of two types; in one it is due to a disappearance of an existing sensitivity to foreign proteins. Such loss of sensitivity frequently occurs immediately after a severe attack of some allergic manifestation, the threshold apparently having been raised as a result of an overwhelming dose. The second refractory type is more or less permanent and is due to the fact that in certain unusual allergic individuals the skin does not partake of the ability to become sensitive to foreign proteins as does the respiratory tract or possibly the gastro-intestinal tract.

At this point it might be well to bring up the question of treatment and diagnosis by the so-called elimination diets. Because, as has been pointed out, there is occasionally a lack of co-relation between the results of skin tests and clinical observation, a method of clinical trial by means of diet has been developed which is based on the principle of giving a basic diet consisting of foods which experience has shown seldom give positive skin reactions. This basic or elimination diet is given until symptoms disappear. Single foods are then added to the diet at given intervals. Then, as symptoms do or do not follow one may say that this or the other food is one to which the patient is or is not sensitive. This practice is of use in the exceptions already spoken of, but unfortunately because its limitations are not known it is now being used³ not only to find what foods make a patient sick, but also to find out whether or not he is allergic, which rightly should and can be done by ordinary clinical means. This is brought out because there are so many diseases aside from allergy which may be affected by changes in diet.

Let us examine some of the limitations of the use of elimination diets and some of the fallacies which allow these limitations to go unrecognized:

1. Elimination diets have to do with

foods alone, and yet we know that only one child (or adult) out of 100 is sensitive to foods alone². It is not true that foods are the only cause of asthma in childhood, for even though we remove offending foods from the diet, symptoms do not clear up unless we also take care of the pollens and other inhaled substances. Nor is it true that eczema, which is almost always thought to be due to food sensitivity alone, will always clear up without the same care being taken with inhaled and contacted substances. The elimination diet, of course, does not include these. In other words, foods are not the only cause of symptoms even in the very young nor in those patients suffering with symptoms which are usually considered as due to foods alone.

2. Elimination diets are based on the use of a group of foods which do not ordinarily give positive skin reactions. In other words, they are based on the results of skin tests in a large group of patients. It is quite plain from this that many patients will be sensitive to foods in the elimination diet, and for this reason more than one diet is usually given in case the first does not relieve the symptoms. Each diet is given a trial of from five to fourteen days. If successful in relieving symptoms, foods are added one at a time until a diet of sufficient variety, calories, vitamins and salts is reached. Each relapse, of course, means a longer period before this stage is reached. In any event, many weeks and possibly months are needed to develop this diet. It would seem logical, therefore, since the elimination diet is based on the results of skin tests, that the skin tests be done first. Then, if no reactions are obtained, or if positive and negative reactions do not jibe with the clinical results, an elimination diet based on the skin tests is begun.

3. Elimination diets require a great deal of intelligent cooperation on the part of the patient. This is not always forthcoming. On the other hand, the physician who depends on elimination diets alone will be at a loss where to turn if they fail him. It is well then to have pointed out their limitations and their uses, just as we have in the

skin tests, in order that he may know just how useful each tool is.

The role of foods in the treatment of allergy is of course one that affects the dietary. Our experience has been such that we make no attempt to desensitize allergic patients to foods by means of injection or graduated doses by mouth. Dietary treatment is based on certain principles which have been developed mainly through clinical observation, but whose scientific explanation has not yet satisfactorily been made. Before considering dietary treatment we must again emphasize the fact that foods are only one source of trouble and that a proper measure of their role in the causation of symptoms can only be made if one eliminates proteins from other sources either by removal from the environment or desensitization by injection.

Granted, then, that the proteins from sources other than food have been so taken care of, we can now properly turn to the diet in the treatment of allergy. The removal from the diet of foods which give positive reactions usually results in the alleviation of any symptoms which may be due to foods. Despite exceptions, this sequence of events is of sufficiently common occurrence to warrant using the skin tests as a starting point from which to build up the diet. The observation already made, that some foods which do give positive skin reactions do not bring out or aggravate symptoms, should not be used as a basis for including these offenders in the diet. On the principle that the total protein dosage as opposed to a threshold of tolerance to specific offenders may explain the production of symptoms—these apparent non-offenders may actually be producing subthreshold symptoms. Because we have found that the absence of a food from the diet tends to increase the tolerance to this food, or, put in another way, tends to desensitize to this food, we have not found it advisable to give injections or measured dosages of food in the attempt to desensitize. Not only have we and others had severe constitutional reactions from such attempts, but the period required for such a successful desensitization is fully as long as is required by

omitting from the diet the offending food. Moreover, most patients react to so many proteins that ordinarily it would be a practical impossibility to include them all in any type of injection. Skin reactions to a single food, or to a single substance of any type, are extremely rare. Practically every patient reacts to several substances in each group—that is to pollen, food, or epidermal substances. In almost 5000 tests we have found sensitivity to foods alone in only one patient out of each hundred. This is an important consideration in evaluating the role of food in the production of allergic symptoms.

So far we have treated the general problems peculiar to the presence of food sensitivity in an allergic individual. We now come to the particular problems involved in developing suitable diets for such individuals. We must never lose sight of the fact that we are treating an individual and not a disease and that it may often be necessary to provide a suitable diet even at the expense of permitting some symptoms to recur or persist. Thus, in an infant sensitive to all the essential foods such as wheat, milk, and eggs, it may be necessary in order to keep up nutrition to permit the inclusion of some of these in the diet. Aside from nutrition we must also care for the mineral and vitamin requirements of our patients, and it will often take skillful dietetic work and close cooperation between dietitian and patient to evolve a diet to satisfy all requirements.

Some attempt has been made in the past to get around difficulties such as sensitivity to milk in infants. One of the methods is to give just that particular portion of the protein of milk to which the patient is not sensitive, therefore we have "casein milk" and "casein-free milk." Other attempts have been directed at changing the protein of the milk so that its activity is diminished or destroyed as in so-called "non-allergic milk," which is heat-treated. Such attempts are rarely successful in very sensitive individuals, but are helpful in less sensitive ones. A very sensitive individual usually

reacts to all the proteins of milk and to such a degree that even though the proteins have been heat-treated he still develops symptoms from their ingestion. Several substitutes for milk have been developed, such as "soy bean milk" and Cemac, which contain all the essentials such as caloric value, proper portions of proteins, fats and carbohydrates, vitamins and minerals obtained from various sources such as vegetables, meats, etc. Here again, however, the sensitive individual being seldom sensitive to milk alone is sensitive to one or more of the constituents of the mixtures so that in our practice we have found very little practical use for them. The problem of furnishing a milk substitute must be considered entirely from the point of view of the individual concerned and again the fact must not be lost sight of that the general welfare of the individual comes first even at the expense of producing symptoms.

As is obvious from the discussion of treatment thus far, we rely so far as possible mainly on the avoidance of all foods which give positive reactions. By this we accomplish several desirable results. In the first place we have a logical point of departure for setting up a dietetic regime, differing from the routine use of text-book elimination diets in being based on data derived from a study of the specific patient under treatment. In the second place we avoid upsetting the state of allergic balance in which the patient may be found by keeping the total possible protein dose at a minimum. In the third place we can make use of the tendency on the part of allergic patients to develop an increase in tolerance to proteins which are not present in the diet, thus accomplishing the same desensitization which successful injection treatment might accomplish.

This last, being the foundation of our therapy in food sensitization, merits further discussion. By means of the skin tests we have, except for occasional exceptions, complete control of those factors in the diet which may produce symptoms. Ordinarily a diet based on skin tests results in almost immediate clearing up of symptoms. This

period lasts for a varying length of time. Symptoms may then begin to reappear. This means that the patient is becoming sensitive to the foods in the new diet, for obviously the constitutional tendency to become sensitive has not been changed. Now by testing the patient again we can identify the new offenders and remove them from the diet and by this time, because of the tendency to become non-sensitive to foods not in the diet, former offenders can replace the new offenders. In this way, children particularly can be carried practically symptom-free through the period of growth and social adaptation. The importance of this accomplishment cannot be overemphasized, for a state of invalidism or semi-invalidism in the formative period of a child's life often determines much not only of his physical but also of his social future.

Moreover, and this applies particularly to adults, we have found that the success of desensitization to pollens and other inhalants is greatly dependent on the simultaneous removal of offending foods. In the early days of pollen therapy of seasonal hay fever we found that, despite apparently adequate and proper treatment with pollen extracts, a certain proportion failed to obtain relief of symptoms. This proportion was considerably decreased when it was found that many of these patients gave positive skin reactions to foods, and these foods were removed from the diet during the season of hay fever. This we felt was logical in view of the concept of total protein dosage. Further consideration has led us to advise the omission of these positively reacting foods throughout the year despite the seasonal incidence of symptoms. This advice was based on the observation that many seasonal hay fever patients on examination during symptom-free periods showed allergic changes in the nasal mucous membrane. These changes were insufficient to produce symptoms of sufficient severity to cause annoyance but on the other hand were certainly conducive to the formation of chronic changes such as the formation of nasal polypi and the development of in-

fectious sinusitis through interference with drainage.

So again we come back to our original premise, that not sensitization to foods nor to pollens or epidermals alone should occupy our attention, but that each of these types of sensitization may and usually does enter into the causation of symptoms in allergic patients. Each has characteristic modes and places of action which must be known and whose importance must be weighed—not, however, to the exclusion of any of the others.

REFERENCES

- ¹Duke, W. W.: J.A.M.A. 81:886, Sept. 15, 1933.
²Piness, G., and Miller, H.: Jr. Allergy, 4:18, 1932.
³Rowe, A. H.: Food Allergy, Phila., Lea & Febiger, 1931.
⁴Alexander, H. L.: Med. Clin. N. Am., 11:399, Sept., 1927.
⁵Vaughan, W. T.: So. Med. Jr., 17:749, 1924; and Jr. Lab. & Clin. Med., 13:955, 1928.

ABSTRACT OF DISCUSSION

Melville Black, M.D., Denver: I venture that if I were to ask the majority of people in this room to give me a definition of the term allergy they would be unable to do so. By virtue of that fact, I ask the essayist to give us a simple working term or definition of allergy.

T. D. Cunningham, M.D., Denver: Allergy is not as simple as a lot of us believe. Ninety per cent of patients who are sensitive to anything have a family history of sensitivity—either eczema, asthma, or hay fever. That in itself is enough in any history to make you suspicious that allergy may be a cause in the patient's present symptoms.

Dr. Piness has spoken about food, pollens, etc., and their various reactions. There is a general nutritional reaction when an individual has been partaking of these foods to which he is sensitive. A small child who is having asthma and hay fever, with a very bad color, taken off the food (if it happens to be food that is causing it) will show an immediate change in the whole condition. Not only will his spirit be better, his nutrition better, but the child feels better. He has been literally poisoned by these foods to which he is sensitive.

A good family history should first be taken. Second, if you do not get an adequate test there are various things that influence it. For example, some patients will react to skin scratches alone—to every scratch. The individual who will react that way may be changed by a dose of calomel and salts over night, so the next day he may react normally to skin scratches and give you positive tests which are reliable. If an individual has had adrenalin or ephedrin within three or four hours of the time of skin testing, negative and erroneous skin tests will be a source of error in the treatment.

The question of reading your test is most im-

portant, because food tests do not give the large reactions that pollens do. Hair and pollen give the largest reactions. Foods give varying reactions.

For years I labored under the delusion that most people are not sensitive to beef because the particular beef protein which I had obtained from one house did not react on anyone. When I got beef protein from another place I found that they reacted to beef about as often as to any other protein. When you commence to put an individual on an elimination diet, it is very important to know that the proteins are reliable. You will find also that the reverse is true—that all individuals react to certain proteins, so that protein has to be eliminated, or obtain one which is more reliable.

W. C. Howell, M.D., Colorado Springs: It is a mistake to keep emphasizing protein sensitivity. You will find true cases of allergy that are sensitive to substances that contain no protein whatsoever. One that comes to my mind is sensitiveness to novocain, which was one of the most marked cases of sensitiveness that I ever dealt with, and the results were satisfactory on complete elimination of novocain. You will find cases of sensitiveness to honey, which is not a protein substance at all, and you will find cases of sensitiveness that look allergic—cases sensitive to butter and to turpentine, principally composed of fats.

In regard to the elimination diet, if you are able to take this basic diet that has been proposed and feed the patient on these very few substances and hold him long, you are a better diplomat than I am. I am probably not enough of a dietitian, but I can't keep my patients from becoming anemic. I can't keep them from losing weight. I have yet to succeed in maintaining weight and hemoglobin content on one of these rigid basic diets. I am not talking about the elimination of certain substances to which a patient is definitely sensitive, as proved by intracutaneous or scratch or patch test; I am talking about taking a very few articles and putting your patient rigidly on that and expecting him to stay there.

W. W. Wasson, M.D., Denver: This subject is one in which we deal not with the beginning of disease but with the end result. It is like our procedure for goiter; we remove the gland surgically or we treat it with x-ray or other means.

Where is the beginning of allergy? Is it in the hereditary syndrome? It is certain that we may inherit microscopic-anatomic characteristics which may cause our allergic responses. But then, what are these allergic responses? Are they chemical, or nervous, or to what class do they belong? Asthmatic and hay fever patients can not be considered in terms of a few months or even a few years. The fundamental causes of hay fever or asthma are not laid down in a few weeks or a few months. They begin very early in life and develop into recognizable diseases much later.

The individual's combat with infection starts with the beginning of life, and the respiratory tract is one of the most susceptible points of attack. Hay fever and asthma are common manifestations of the continuous siege upon this tract.

However, the combat with pollens, dust, and proteins does not begin at ten or twenty years of age, but, as I have said before, in the first few days of life. The irritating agents produce a symptom complex which in turn complicates the whole subject of allergy. The latter is based upon very complex pathology which is not well understood. But one point is certain, that the mucous membrane is affected by a fundamental pathological condition which must be considered in any discussion of allergy.

Dr. Piness (closing): The definition of allergy as defined by Richet was that it was a reaction to some foreign substance. He did not limit to protein; he said "some foreign substance" which gave a broad usage of the term allergy.

We who have been doing work along this line do not limit it so strictly. We say a hypersensitivity or altered reactivity to some foreign substance, namely protein. As we grow older in the work we modify and add to it and we say "protein or perhaps some other thing which we know nothing about." Recently the question of polysaccharids has come up, and again we may have to change our opinion.

Dr. Cunningham brought out that the tests were to be used in diagnosis. I don't agree with him. My contention during my entire discussion this morning was that tests primarily were only to be used to determine the etiology; that is, if you can't make a diagnosis of allergy without going to your tests first, then I don't think you have a right to be doing tests because you get too many negative results and you put patients on elimination diets and they get well and you say, "He has an allergy," which is exactly what has happened with Rowe.

I personally contend that we have progressed in this work and not retrogressed, and if Rowe was as progressive as we think he should be, then he should have just as many reactions if not more at this time than he had in 1926, so that I think that elimination diet becomes then a matter of seeking publicity or a fad, or it is a question of a man being overenthusiastic. I feel that when we get to tests they are specific if properly done and properly interpreted.

As far as size of food reaction is concerned, I think those here who have seen the work in my clinic and office will agree with me that our reactions to food are no different than they are to pollen. We get just as large reactions to one as to another. That goes for any type of protein we work with. My contention is that if given an active protein and a sensitive patient, you are going to get reactions.

Dr. Howell's discussion on non-protein substances that give reactions was interesting. Recently in the J.A.M.A., Dr. Dyssant reported the case of an aspirin death. I have had two such deaths from aspirin. We know that aspirin gives certain reactions in certain asthmatics and it behooves every man who treats an asthmatic or any allergic individual to ask him, "Are there certain drugs that you cannot take?" It is the tendency of most of us to discount what our patients tell us as to their idiosyncrasies. It has been my sad experience to see several deaths because I, too, felt as most men do, "Oh, he can take it, anyway!"

Dr. Howell, I want to correct you on the question of honey. Honey contains plenty of protein, in the form of pollen and if you didn't get pollen you wouldn't get honey. As far as butter is

concerned, there is only one type of butter that gives reaction and that is the unwashed butter which still contains whey protein. I am quite in accord with Dr. Howell and I appreciate very much his discussion on results from elimination diets based on the type that Rowe advocates. I think they are an obsession, they have no real value, they give no results, and I feel that any diet given to any allergic individual will give some relief because of the psychology of being a good salesman and selling that patient a diet, because most patients come to you asking for a diet.

Dr. Wasson brings up that interesting subject of the why of allergy? We don't know. I wish we did. It would make it so simple. But there is this fact that we cannot avoid, and that is heredity. Most men report from 37 to 50 odd per cent of histories of heredity. I believe that if we knew more about our genealogy we'd get a larger percentage of positive histories. Then again, one must take into consideration the type of individual that you deal with in a clinic. When you have a clinic such as mine where I see 150 children or 100 adults on a clinic day, where you have 40 different races to handle, it is pretty difficult to get the proper history. Then even with our intelligent group, if you ask certain individuals from certain parts of this country, "Did any in your family have asthma?" they say no, but if you say to them, "Did any one have phthisis or heaves?" they say yes. To them it isn't asthma, while to me it probably is.

As far as our objective in the treatment of the allergic individual is concerned, we have only one. If you will note, I never mention the word "cure." I never said that I obtained a permanent and total desensitization. I never even discussed that. Our objective is primarily to build up for that individual a sufficient tolerance or threshold so that he may tolerate the things that he is sensitive to, either by contact or ingestion or whatnot. I have cases now that I hope soon to report that have been free over a period of fifteen years or more.

Rackemann has reported a series of cases that has been free over a period of ten years or more, and I believe that when we have done this work as long as men who work with tuberculosis have and report our results as they are reporting theirs now, we will come to a definite understanding as to what can and cannot be done, but on the other hand I think that the present method of treating allergic individuals offers the best that can be offered at this time with the greatest amount of relief for the sufferer from this condition.

The inter-dependent relationship existing between the individual physician and his county, state and national medical organization is a reality which every physician should recognize. Neither can get far or accomplish much without the aid and support of the other.—Ohio State Medical Journal.

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ALFRED H. WASHBURN, M.D.
DENVER

The importance of understanding the blood picture during infancy does not lie simply in the added ability it gives for diagnosing diseases of the blood. As a matter of fact, primary diseases of the hematopoietic system are rather rare during the first year of life. However, if one thinks of the peripheral blood stream as a mirror in which one may see reflected the evidence of disturbances of many sorts in widely separated parts of the body, then the routine examination of this reflected picture in the blood becomes of great significance. One must remember that the blood stream contacts almost every part of the organism every minute of life. The briefest listing of some of its functions would include the carrying of the oxygen supply for all body tissues, the removal of carbon dioxide, the maintenance of the delicate balance between acid and base, the preservation of life through the coagulation mechanism, and the intricate workings of the factors concerned with resistance and immunity in which the white blood cells play a significant role. Such a minimum list suggests at once the possibility of an intimate correlation between disturbances in these functions and abnormalities in the blood picture. It suggests also the need for knowing what possible variations in the blood picture are consistent with health and which ones point to the presence of some disease process. Since the average situation and the variations from that average are quite different in early life from those with which we are familiar in later life, it seems worth while to stress certain of the characteristics of the blood picture in healthy young infants.

Before describing the actual findings in individual babies, let us consider for a moment some of the factors which play a part in producing the characteristic infantile blood pictures. In the adult, red cells and leucocytes of bone marrow origin are manufactured only at the ends of the shafts of certain long bones of the body. Contrast this with the situation at birth when these cells are being produced in the red marrow of most of the long and flat bones of the body. If we go back into the last weeks of fetal life we find the liver and spleen also taking part in this active hematopoiesis, as well as islands of lymph tissue throughout the body. Furthermore, the lymphoid tissue itself which is relatively undeveloped at birth grows quite rapidly throughout the first year of life. Thus we are not surprised at the ease with which the numbers of all cells may increase nor by the appearance of immature cells in the circulation in considerable numbers. The available oxygen for the fetus "in utero" is another factor of some possible significance. Since the oxygen supply for the fetus is definitely less than that after birth there will be the need for greater oxygen-carrying capacity of the blood if the same amount is to be delivered to the tissues. Finally, the small infant is a very unstable organism from many aspects. The mechanisms controlling heat regulation, vasomotor responses, and neuro-muscular reactions show frequent instability in the small infant. Therefore, we shall be prepared for much less stability in the blood pictures of infancy than in those of the older child or adult.

Even a brief review of the literature on the blood in infancy would constitute a paper in itself. From our present point of view there are two considerations which make it unnecessary to dwell at any length on this great volume of material. The first is the tendency to build up average figures for red blood counts, white blood counts, et cetera, from a varying number of counts, each on a different individual baby. This

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Presentation of this paper was accompanied by a number of charts graphically depicting the data from the original research work herein discussed.

procedure prevents the reader from gaining a proper appreciation of individual variations and fails to depict the possible fluctuations in any one individual baby over a given period of time. The second tendency is to report the effect of certain diets, drugs, diseases, or physical agents on the blood counts of babies without any adequate controlling of what the blood picture might have been in the absence of such disturbing factors. It must be apparent that we need to know what fluctuations are consistent with health in any one baby and how much variation exists in different babies before we can interpret safely the variations found in the presence of disease or other disturbing factors. The white blood counts reported for this age period range all the way from a lower limit of 3,800 to an upper limit of 23,700 per cubic millimeter. This paper represents a preliminary report of a study whose purpose is to define more clearly the possible variations to be found in the blood pictures of healthy young infants.

Material

The babies whose blood counts are recorded in this paper were studied at the Florence Crittenton Home in Denver. Since the start of the study in 1931, fifteen babies have been followed for periods varying from a few weeks to six months. Most of them have been seen first between the time of their birth and the fourteenth day and the majority have been followed for at least three months. Blood counts have been done at all hours of the day and night. All infants are kept in the regular nursery under routine care such as any physician might prescribe for a healthy baby during the first six months of life. They have been under the constant care and observation of a graduate nurse and have been observed by the author about once every two weeks. Only healthy babies on a regular regime have been included in the study.

Methods

No methods have been used which are not applicable in the routine of private practice. The blood was always obtained by a prick from the infant's heel. Red blood the usual way, counting one-half a square counts and white blood counts were done in

millimeter for the former and eight square millimeters for the latter. The hemoglobin was determined by the Sahli method using a solid standard with which 17.0 grams per 100 c.c. equalled 100 per cent. Differential white counts were carried out on cover-slip smears stained with Wright's stain. A small number of checks have been made on fresh drop preparations vitally stained with neutral red and Janus green B, while a good many counts have been checked on smears stained with a combined peroxidase and Wright's stain¹. In general all methods were the same as those previously described by the author in reporting the leucocyte fluctuations in early infancy².

All possible errors in the obtaining of the blood as well as in the counting of the cells were checked many times before the start of these counts and during the studies. It is felt that they were reduced to a minimum and it seems certain that they were, at least, no greater than would be found in the average clinical laboratory.

Results

1. Red blood counts: It has been pointed out by Lippman³, Lucas⁴, and others that the number of red cells at birth varies from 4,000,000 to 7,000,000 per cubic millimeter with a definite tendency to range above rather than below the accepted adult normal of 5,000,000. It may be noted that the majority of the counts descend quite rapidly from this high level of the newborn, reaching a low point of 3.3 to 5.0 million at 6 to 12 weeks. After this there is apparently a tendency for a slow rise so that by the end of the six months' period the counts range from 4.5 to 5.5 million. Both the total number of babies and the number of counts are too small to justify any general deductions. Both the similarity of the ranges reported by other authors during the newborn period and the great variation in the reported counts from one to six months are quite apparent. The average text book figures, taken from Appleton's Clinical Pediatrics⁵, are probably a little low, representing averages taken mostly from hospital and clinic cases. The figures of Mayer⁶ are similarly too high and must be considered either as a selected group or the result of some unusual

factor. The zones noted by Merritt and Davidson⁷ are the closest to those of the present study and probably represent the nearest approach to the correct figures for the average healthy baby in this country. The tendency toward high values in the first two weeks and low values during the period from six to twelve weeks is a constant one in these healthy babies. The upward swing from ten to twenty weeks without any medication or dietary changes is almost as constant a phenomenon, particularly in those babies whose count reaches a very low point in the previous period. In view of the present fad for all sorts of iron and copper medication, it is just as well to be familiar with this curve of the red blood counts in average healthy infants.

2. Hemoglobin: The findings in regard to the amount of hemoglobin are quite similar to those just described for the number of red blood cells. The range of the eighty-five determinations in my series have been compared with those of other workers. The lowest zone, that of Mackay⁸, is from a study of clinic babies in the poorer sections of London. The studies of Williamson⁹ and Appleton¹⁰ represent the usually accepted figures for the hemoglobin during this age period. Since the preparation of my chart, figures have been published by Elvehjem, Peterson, and Mendenhall¹¹ for the hemoglobin during the first year. Their data, derived from 2000 determinations on 750 infants, show a smaller range during the first month. From the first to the sixth month their figures, graphically speaking, yield a broader zone at a slightly lower level. The hemoglobin curve parallels that of the red blood counts quite closely. It may be noted that the hemoglobin level tends to be definitely high in relation to the red blood count during the first two to three months, but slightly lower during the last two to three months of this first half year of life.

3. White blood counts: Whereas the red blood count and hemoglobin content tend to remain quite constant during the hours of the day or night and change rather slowly from week to week, at least after the first few weeks of life, the same constancy is quite lacking in the leucocyte picture.

Counts performed each hour during the day show very considerable fluctuations and counts repeated on the same baby on different days show no uniform tendency of level at any one time of day. There are no demonstrable tendencies according to the hours of the day or the day of age during the first few months. We might summarize our leucocyte count findings as follows: The total white blood count may vary from 4,000 to 23,000 without indicating any demonstrable disease process; the counts in any individual baby tend to fluctuate widely within this zone, but the individual zone is not necessarily exactly the same for every baby; there is no evidence of any orderly rhythms in the fluctuations of the leucocyte count during the hours of the day or night. It may be of further interest to note that it was not possible to find any correlation between the white blood count fluctuations and such factors as digestion, rest, activity, or other routine events of the day.

4. Differentiation of white blood cells: The variations in the different types of leucocytes are somewhat more consistent than are the fluctuations in the total number of white blood cells. There is, at least, a fairly constant tendency for the curve of the lymphocytes to parallel that of the total counts. Occasionally the curve of the polymorphonuclear neutrophils or other cells of bone marrow origin parallels that of the total white blood counts for one to three hours, but more often there seems to be very little correlation between the fluctuations of the total count and those of any individual cell type except the lymphocytes. Minimum and maximum counts obtained for each type of cell indicate two prominent points: First, the lymphocytes usually predominate the picture; and second, the possible degree of variation of almost every cell type is quite extreme even in healthy young babies.

5. The detailed examination of the smear: No examination of the blood is quite complete without a more careful scrutiny of the stained smear than is possible in doing a routine differential count. The failure of many writers to make sufficient note of the immature cells of both red and white cell

origin in the blood of young infants is probably dependent upon inadequate study of the stained smear. Nearly every newborn baby will show an occasional nucleated red blood cell. Premature babies and, rarely, full-term babies may show nucleated cells in considerable numbers. Reticulocytes usually run well above the average figure found later in childhood and adult life. In the newborn period they may vary from 0 to 5.5 per cent as shown by the studies of Kato¹², Scyforth and Jurgens¹³, and Merritt and Davidson⁷. There is a sharp decline coincident with the decreasing red blood count followed by a gradual increase after the second month⁷. During the first few weeks there is also a tendency to red blood cells with a large diameter¹⁴ as well as to greater variability in size, shape, and staining than later in infancy or childhood. All these variations in the erythrocytes become less striking after the first eight to ten weeks but even as late as the sixth month occasional immature or abnormal forms are seen.

An estimate of the hemoglobin content from the appearance of the stained smear is never very significant, but it may be worth noting that during the first few weeks of life the red cells are apt to be highly colored, while during the latter part of the first six months of life they tend toward a definite achromia. This is, of course, consistent with the changing values in the numbers of red blood cells and the amount of hemoglobin already noted.

The platelets are present in relatively large numbers in the blood of newborn babies. Counts have been reported as high as 500,000 per cubic millimeter. There are no adequate figures reported for the first six months of life except for those of Merritt and Davidson⁷ who gave the average as 348,000. On the stained smear, platelets ordinarily appear to be somewhat more plentiful during these early months than later on during childhood. There also seems to be a tendency for greater variability in size and in the amount of granulation.

A careful study of the leucocytes is always interesting and sometimes instructive. In the first few weeks immature cells of both

lymphocytic and myelocytic series may run as high as 10 to 12 per cent. Later they may be expected to vary from 0 to 5 per cent of the total count. Immature cells of the bone marrow series are most noticeable in the first few days of life when myelocytes and immature polys are quite common. Later on myelocytes are seen only occasionally, but neutrophils with poorly lobulated nuclei persist in the blood stream in varying numbers throughout the first six months. Eosinophils usually vary from 1 to 8 per cent with a tendency to be higher in this age period than during the later years of childhood. Basophils show no unusual tendencies, varying from 0 to 1 per cent.

In these early months the small lymphocyte, typical of the blood of older children or adults, rarely plays a dominant role in the leucocyte picture. Usually the majority of the lymphocytes are either large lymphocytes or intermediate in size between the large and the small. These cells show great variation in the amount of cytoplasm, the depth of its staining, and the numbers of so-called azurphilic granules. Nuclei which are indented or oval rather than round are also common.

Perhaps the greatest variation of all is seen in the large mononuclear or "monocyte" group. At one extreme they may resemble quite closely certain of the large lymphocytes while at the opposite extreme they may have much the appearance of an immature neutrophil or a myelocyte. This is due to the great variability in the amount of granulation in the cytoplasm and also in the shape of the nucleus. In the author's experience they are most easily differentiated in smears stained with a combined peroxidase and Wright's stain¹. Vital staining of fresh drop preparations also helps materially in checking the differential count as far as monocytes are concerned.

"Unclassified" and undifferentiated cells appear most frequently in the newborn period but occur in small numbers throughout the first six months, forming 0 to 2 per cent of the total count. Most of the cells which cannot be classified are large mononuclear forms, apparently atypical or immature cells, probably belonging in either the

myelocytic or monocytic group. The undifferentiated cells, which I have designated as "blasts," might be either lymphoblasts or myeloblasts. They are usually large—occasionally very large—cells with deep blue, "fuzzy" cytoplasm without granules and with a round, frequently eccentrically placed, nucleus which takes a purplish lavender stain. These cells rarely form more than 0.5 per cent of the white blood cells, but continue to appear occasionally in some babies throughout the first six months.

Summary

An attempt is made to depict the variations found in the blood cell picture during the first six months in healthy babies.

The red blood count is high at birth and for the first few days, then decreases from well above 5 million to a low point of 3.3 to 5.0 million by the end of the second month. There follows a tendency to increase up to 4.5 to 5.5 million by the end of the fifth month.

The hemoglobin parallels the red blood count quite closely, but shows a tendency to be relatively higher in the first two months and lower in the last two months of this period.

The leucocytes show great fluctuations in total numbers and in types of cells during the hours of the day and night without any evidence of consistent rhythms. The zones within which such variations occur are not the same for every baby. The lower level of the zones reported was approximately 4,000 and the upper limit 23,000.

A description is given of the various types of leucocytes seen in the stained smears.

REFERENCES

- ¹Washburn, A. H.: A Combined Peroxidase and Wright's Stain for Routine Blood Smears. *J. Lab. and Clin. Med.* 14:246 (Dec.), 1928.
- ²Washburn, A. H.: A Study of the Blood Cells in Healthy Young Infants. I. The Leucocytic Picture During the First Three Months With Special Reference to Hourly and Daily Variations. *Am. J. Dis. Child.* (in press).
- ³Lippman, H. S.: A Morphologic and Quantitative Study of the Blood Corpuscles in the Newborn Period. *Am. J. Dis. Child.* 27:473 (May), 1924.
- ⁴Lucas, W. P., Dearing, B. F., Hoobler, H. R., Cox, R. A., Jones, M. R., and Smyth, F. S.: Blood Studies in the Newborn. *Am. J. Dis. Child.* 22:525 (Dec.), 1921.
- ⁵Lucas, W. P., and Washburn, A. H.: Blood and Blood-Building Organs. *Clinical Pediatrics*, Vol. XI, pp. 38-41, D. Appleton and Co., New York, 1926.
- ⁶Mayer, L. H.: A Study of the Erythrocyte Curve at Various Ages and Its Relationship to the Hemoglobin Curve. *Arch. Int. Med.* 30:478 (Oct.), 1922.
- ⁷Merritt, K. K., and Davidson, L. T.: The Anemia of Prematurity. (including Blood Counts on Normal Infants During the First Year of Life.) (In press; data obtained by personal communication).
- ⁸Mackay, H. M. M.: Nutritional Anemia in Infancy. *Med. Res. Council, London*, 1931, Sp. Rep. Ser. No. 157.
- ⁹Williamson, C. S.: Influence of Age and Sex on Hemoglobin. *Arch. Int. Med.* 18:505 (Oct.), 1916.
- ¹⁰Appleton, V. B.: Determination of Hemoglobin During Infancy by the Palmer and Van Slyke Method. *J. Biol. Chem.* 34:369 (May), 1918.
- ¹¹Kato, K.: Physiologic Variations of Reticulocytes in the Newborn: A Study of 219 Cases. *Folia haemat.* 46:377-396, 1932.
- ¹²Seyfarth, C., Jurgens, R.: Reticulocytes (Vital Staining, Granulated Erythrocytes) of Embryo and Newborn. *Virchow's Arch. f. Path. Anat.* 266:676-692, 1928.
- ¹³Van Creveld, S.: Diameter of Red Blood Cells of Premature Infants and Those Born at Full-term. *Am. J. Dis. Child.* 44:701 (Oct.), 1932.

DISCUSSION

Gerald B. Webb, M.D., Colorado Springs: That is a terrific amount of work you have done, Dr. Washburn. I was thinking of Peterson and Atkinson. They didn't seem to be lower than your figures, and I was wondering whether at this altitude there was any difference in the lymphocyte picture in your infants.

Frank B. Stephenson, M.D., Denver: I'd like to ask Dr. Washburn whether this information about what we look upon as a rather high leucocyte count will make it difficult in determining about infections in children of those ages. How much can you depend upon the total leucocyte count as a guide in acute infectious diseases?

E. N. Chapman, M.D., Colorado Springs: I'd like to ask Dr. Washburn if he has done hourly counts on diseased children. In 1927, Dr. Medlar of Mount McGregor did hourly counts on a number of healthy adults and found this variation in total leucocyte count and also in the percentage of polys, et cetera, although the polys tended to run with the total count more than the lymphocytes. He was also doing a great number of counts on cases of tuberculosis and in the series of tuberculous cases he found very little variation in the hourly count.

He attributed that partly to the fact that the cases of tuberculosis were on a very limited regime. Their exercise was the same through the day, whereas the healthy individuals varied their degree of activity a good deal.

Dr. Washburn (closing): I rather expected somebody to mention the relation of altitude to the leucocyte count. I don't feel I have enough material to make definite statements about that, but so far my impression is that comparing studies I have been making here with some I did in San Francisco, they are practically identical.

My impression is that the differential counts, the proportion of polymorphonuclears is of greater importance in infants than the total of white blood cells.

This is definitely a preliminary report. These

are all healthy babies, and I have to look back on previous experience with sick babies to answer Dr. Stephenson's question—not to this study.

I can only answer Dr. Chapman's question in a most meager way. In following these babies over this period of time I have had some intestinal upsets or other disturbances.

I have dropped those counts out of my series and haven't counted them. They have all been brief episodes, but in each case so encountered

there has been so much less fluctuation during the day as to be very striking. One of them varied a matter of only two thousand, which is only twice my limit of error during the day.

Again looking back to clinical experience, I should say most distinctly that on the ward where you think an intern has made a mistake and order a second count within the hour, it is apt to be pretty close and not away off, as in my counts on healthy babies.

HUMIDITY

ROBERT S. IRWIN, M.D.
DENVER

Imagine, if you will, the hot blistering sands of the Sahara Desert. The overhead tropical sun pours its heat into the white sand. The sand throws it back. The atmosphere shimmers from effects of the dessicating heat. With haggard eyes and open mouth a man staggers and stumbles along gasping for breath. He no longer sweats. The dry desert air has evaporated all the moisture his body can spare. His dry parched lips and inflamed throat suffer agony with each breath of hot dry air. Of oxygen and nitrogen he has plenty. All he is lacking is moisture. The desert humidity is but 20 per cent.

A survey made last winter in Denver of twelve apartments and eighteen private homes gave an average relative humidity of 12 to 18 per cent. Even the death dealing desert has 20 per cent. Quoting Harry A. Mount in *Popular Science Monthly*: "So it is today we are confronted with an array of authority to prove that probably in the whole of the United States there are less than a hundred homes and but very few offices where the air is humidified to the degree vitally necessary for our health."

Dr. Herman N. Bundesen, Commissioner of Health, Chicago, says: "Dry hot air dries out the protective secretions of the delicate linings of the air passages and permits the germs to do their dirty work. Colds, coughs, bronchitis, "flu" and pneumonia are winter diseases. Living indoors in still, hot, and dry air decreases our resistance to these diseases."

What is this thing called humidity that seems to be so important? Where does it come from and where does it go? In our atmosphere all gasses, with one exception,

are staple and constant—always in the same place and in the same proportion. Oxygen is always 21 per cent and nitrogen 78 per cent. The one exception is water vapor or humidity. In Death Valley the atmosphere may be dry enough to crack our skin—in London moist enough to soak our clothes. Yet the constituents of the air are the same in both places, excepting the humidity. To quote David Brunt, Superintendent of the Army Meteorological Service: "It is scarcely possible to over-estimate the importance of water vapor in the atmosphere. Its ever-changing amount causes the medium in which the weather develops, to be ever changing its composition and physical properties."

From the beginning of time water vapor has evaporated from the ocean, lakes, rivers, and the earth. Lighter than air, the water vapor rises until it reaches the dew point or air cold enough to condense it. It is then precipitated as rain, snow, sleet, hail, or dew. It forms clouds, mists, and fogs.

Every second the rivers of North and South America alone pour into the ocean 60,000,000 gallons of water. Every second throughout the world 16,000,000 tons of water are precipitated upon the earth. Every drop has gone through the same process—evaporation, condensation, and precipitation. Since the beginning of time not an extra drop has been created nor one particle lost. When it's a liquid—we know its value. As a solid—we utilize it. As a gas—we ignore it.

In one form or another we eat, drink, breath, or absorb it. It is the largest constituent of our bodies and of its importance there is no doubt. One may go weeks with-

out food but only a matter of days without water. Yet what definite fact do we know of water vapor as it affects the human body? That our organs should function properly as far as the atmosphere is concerned, three things are considered—temperature, air movement and humidity. Temperature we understand. We increase or diminish of it at will. We have instruments to measure it. We know how many degrees it takes to make us comfortable. We have certain stated points such as absolute zero, zero, freezing, normal, and boiling. Likewise with the air movement. We create artificial drafts. We open the windows or doors and create a circulation. Just as we have certain well known points in temperature, so certain movements of the air have designated names. Less than one mile an hour is a calm. Four to seven miles is a slight breeze. Twenty-five to thirty-one is a strong breeze. Seventy-five is a hurricane.

These things, temperature and air movement, are understood. But what about humidity, the third necessary factor for our well-being? There are three classifications: namely, saturated air, relative humidity, and absolute humidity. The first, saturated air, is, as the name infers, air that can contain no more moisture. Relative humidity is the percentage of water vapor as compared with the amount that the air can hold. Absolute humidity is the quantity of actual water in the air as expressed in grains. Thus a cubic foot of air saturated at 70 degrees F. would contain 7.98 grains of actual water. If it were half saturated it would be 50 per cent relative humidity and would contain 3.99 grains of actual water, or the absolute humidity. These terms as applied therapeutically mean practically nothing. Yet it has been stated that humidity is of the utmost importance.

Upon entering a patient's room, the temperature immediately is noted. A thermometer is inspected and directions given to keep the room at a designated degree. The stagnant, stale, or fresh air is recognized and directions given to open a window or close a door, or perhaps to start the electric fan. But what about the third element in

this trinity—the ever-present, ever-changing humidity? What about the dry, cracking membranes in the bronchial tubes of an acute bronchitis? As far as one knows the patient may be breathing air drier than the desert. How much moisture do we need for healthful conditions? A review may recall what we know. Sixty-five to 70 per cent of our body is water. According to Gamble of Harvard it enters from the small intestine and is stored in three compartments from which they take the names—vascular fluid, interstitial fluid, and the intercellular fluid—the last being the store-house.

Making allowances for varying conditions, we lose in 24 hours about 45 ounces of water from the kidneys, 16 ounces from exhalation, and 16 to 80 ounces by transpiration and perspiration, the last depending upon whether we are at rest or active. In all, it amounts to about 90 ounces. To replenish this loss we take in about 24 ounces of water daily with our solid food and 4 to 6 ounces with inspiration, altogether about 30 ounces. The balance of 60 ounces necessary to function properly must be supplied by drinking. But what of the loss by respiration and sweating? This is controlled to a great extent by the humidity in the air, governed by the temperature. The drier it is the more we lose by sweat. In saturated air we evaporate practically nothing. The same applies to respiration. The balanced budget of fluid in the body is disturbed and must be adjusted.

Fifteen thousand feet up in the Andes Mountains the Cholo Indians have a chest 10 per cent broader than ours and a diaphragm almost flat. Thus nature has arranged a store house for the diminished oxygen. We of the Caucasian race absorb about 57 per cent of the possible sun's energy. In the tropics nature has so pigmented the negro that he absorbs 84 per cent. This heat so stimulates the sweat glands that he is able by evaporation to work in the intense heat. Nature has accommodated physical conditions to the atmosphere. Just so man too creates an atmosphere most favorable to him. If it's too cold, he heats the air; if too hot, he cools it; if it's stale and stagnant he starts a fan

or raises a window. But the ever-present, ever-changing humidity he ignores.

Let us compare the temperature and humidity of various cities, taking in as diversified territory as necessary.

	ANNUAL AVE. TEMP. Degrees	AVE. REL. HUMIDITY Per cent
Denver	50.1	53
El Paso	63.5	40
Jacksonville	69.3	79
Boston	49.4	72
Chicago	51	70

In warm and dry climates there is little bronchitis. Yet authorities send patients for this condition to such diversified climates as the Adirondacks, Virginia Hot Springs, Ashville, Atlantic City, Florida, Colorado, Wyoming, Arizona, and the White Mountains. With attention to heat and our increasing knowledge of humidity, proper indoor conditions can be made at home. Heating and ventilating engineers (it should have been physicians) have stated that the most satisfactory condition results from a temperature of 68 to 70 degrees, and a relative humidity from 50 per cent to 60 per cent. As stated previously, last winter's survey of eighteen homes and twelve apartment houses gave a humidity of from 12 per cent to 18 per cent. Breathing this dry air in homes and offices, the nose, throat and bronchial tubes are dried, cracked, and irritated by lack of moisture. One then goes out into a humidity of 60 or 80 per cent and

wonders why he is susceptible to colds.

Having humidity in a house does not mean a few dishes of water here and there. The air takes more moisture from our bodies than it gets from these pans of water. It means gallons and not ounces. It means that a room ten feet square needs almost a gallon and a half of water each twenty-four hours. An average six-room house in the winter will take eight gallons of water each twenty-four hours to humidify it properly. With the aid of the hygrometer, the humidity may be determined in a few minutes. Humidity tables and comfort charts may be found in most books on meteorology. That this subject may be given due importance, may I quote Dr. Ellsworth Huntington, well-know climatologist of Yale University:

"Air moisture is just about as important to our health as air temperature. The ideal weather condition is an average temperature of 64 degrees F. and a mean relative humidity of 80 per cent." Continuing, he draws this conclusion: "In our hospitals and sick rooms we are killing thousands of people each winter because we keep the air as dry as that of the desert and at the same time we are filling our hospitals by keeping our homes too dry."

We cannot, as nature has done in high altitudes and the tropics, suit the individual to the climate. But we can, with our increasing knowledge, suit the climate to the individual by humidifying our homes.

FIFTEEN YEARS OF COUNTRY PRACTICE*

W. B. HARDESTY, M.D.
BERTHOUD

Early in the year of 1920, Dr. George Blumer of New Haven, Conn., published an article in American Medicine entitled "The General Practitioner's View of the Defects of Medical Education," wherein he classified and analyzed the criticisms of a number of general practitioners. Appended to his paper was an analysis of 1900 diagnoses furnished by these practitioners from various parts of the country. Each practitioner furnished the diagnoses in approximately

200 consecutive cases. The writer of this paper happened to be one of these general practitioners who supplied the cases, and since then he has had in mind this paper.

It is my desire to present data gathered from a period of fifteen consecutive years of the practice of medicine in the country, where medicine is more of an art than a science because of the lack of ready access to the specialist, the hospital, and well-equipped laboratories. It covers the work done in the years between 1917 and 1933 in a community with a population of ap-

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proximately 2,000—800 of it is in town and the remainder in the rural district.

Table I represents analysis of all the work done, and Table II represents work done on children. Where possible I have tried to separate the work done on children to determine what per cent of all work it was and am giving a separate analysis of this work. They are listed in the order of their frequency, and many of them are not scientific terms. Perhaps a word of explanation would help clarify some of these general diagnoses. "Acute respiratory infections" constitute approximately 10 per cent of all cases. "Throat infections" include all infections limited to the tonsil fossa, pharynx, and larynx, and no attempt was made to emphasize the occurrence of diphtheria or any other specific infections in the throat. "Mouth infections" include infected teeth and mucous membranes of the mouth. Under "sinus infection" are listed those that required definite sinus treatment. "Gastro-intestinal diseases" form nearly 10 per cent of all cases and include all conditions of that nature not listed below. Under "miscellaneous ill-defined conditions" are included cases of neurasthenia. Under the heading "various minor accidents" are included abrasions, sprains, bruises, cuts, et cetera, not included under special headings. "Dislocations" refers to those which are not complicated by a fracture. Under "back strain" are listed those of acute or chronic nature.

"X-ray" was included in this list to determine how much help it has been to me. By request, "general anesthetics" were included as well as "life insurance." In the "obstetrical" work we had one maternal death due to broken compensation of the heart, three months' duration. Fetal deaths were nineteen, of which two were supposedly pituitary, three from forceps, two from breech, three premature, and in seven no cause was given. Forceps were applied in five cases only, three of these with the advice of a consultant and with death of the child. Two face presentations were spontaneous and resulted in death of the child. There were two deaths with congenital defects. Six sets of twins were

noted. Under "female pelvis" are listed those findings which are peculiar to the sex only. "Dysmenorrhea" is a term loosely used and it aims to cover all the diagnoses not included in the other classifications. Under "cystitis" is included all cases with urinary symptoms except those of nephritis, renal calculus, and gonorrhea. A small per cent of diagnoses of "influenza" is probably due to the writer's susceptibility to the infection. "Vaccination (small pox)" was included for curiosity. "Minor external infections" include those of wound infections and all others not listed under other headings. "Operations" were listed separately in order to bring out the per cent of tonsillectomies. Under "boils, abscesses, and carbuncles" are included those abscesses which were treated under local anesthesia. The "consultations" listed were at my request. "Burns" were those which required special treatment for burns. "Typhoid fever" and "small pox" were listed separately from the other exanthemata for emphasis. Under "heart diseases" are all forms of carditis. Under "no diagnosis" are listed those cases where no satisfactory diagnosis could be made, after consultation or after the usual method of examination. Under "arteriosclerosis" were listed those with symptoms referable to the sclerosis. All the "typhoid" cases were found in the first six years; most of them were along a stream that carried the untreated sewage of the town.

Under "acute respiratory infections" in adults, coryza predominated, while in children it was slightly less, because acute respiratory infections in children are often neglected until they become bronchitis. "Pneumonia" was listed separately from the acute infections for comparison.

TABLE I
DIAGNOSES IN ADULTS AND CHILDREN
COMBINED

Acute respiratory infections.....	1610
Coryza	1094
Cough	516
Gastro-intestinal diseases, including disorders in infant feeding.....	1192
Accidents (minor)	1054
Life insurance	880
Miscellaneous ill-defined conditions of weak- ness, cachexia, body tone, exhaustion, as- thenia, et cetera.....	794
All throat infections, including tonsillitis.....	644

Skin diseases	572
Moles and warts	110
Eczemas	67
Impetigo	67
Scabies	62
Weed poison	53
Hives	40
Shingles	40
Acne	35
Indefinite epidermophytosis	22
Obstetrics	503
Female pelvis	465
Dysmenorrhea	259
Leucorrhea	97
Cervical erosion	67
Pelvic infection (indefinite)	52
Cystitis	396
Eyes (foreign body and infection)	395
Influenza	395
Diseases of the ear	353
Vaccination (small pox)	337
Minor external infections	323
Operations	247
Major	85
Minor	55
Tonsillectomy	72
Mouth infections other than throat	244
Boils, abscesses, and carbuncles	228
Liver, gall bladder, and jaundice	214
Fractures	208
Rib	52
Forearm	45
Finger	17
Clavicle	13
Nose	12
Leg	12
Arm	10
Elbow	10
Dislocations	6
Hip	4
Hand	3
Head	3
Thigh	3
Foot	2
Spine	1
Consultations	386
Back strain (lumbar and sacro-iliac)	191
Burns	176
Exanthemata, excepting typhoid and small pox	157
Neuralgia	127
X-ray	124
Sinus infections	99
Rheumatism	97
Chorea	7
Heart diseases	93
Appendicitis	85
Deaths	85
Hemorrhoids	79
No diagnosis	78
Anesthesia (general)	69
Arteriosclerosis	67
Pneumonia (all forms)	64
Goitre (toxic)	52
Male	4
Female	48
Nephritis	45
Abortion	45
Tuberculosis	40
Urethritis (gonorrheal)	37
Ulcers of leg	31
Endocrine	29
Corns	25
Renal colic, including calculus	19
Neuritis	16
Menopause	16
Malignant growths	15
Asthma	14

Inguinal hernia	12
Peptic ulcer	11
Typhoid fever	11
Syphilis	8
Cerebral hemorrhage	8
Small pox	7
Hysteria	7
Diabetes	5
Anemia (primary)	

TABLE II

DIAGNOSES IN CHILDREN

Gastro-intestinal diseases, including disorders in infant feeding	598
Acute respiratory infections	5
Coryza	279
Cough	282
Miscellaneous ill-defined conditions of weakness, poor appetite, exhaustion, cachexia, et cetera	224
All throat infections, including tonsillitis	214
Ears (ache)	207
Ears (paracentesis)	72
Enuresis	88
Mouth infections including teeth	87
Accidents (minor)	84
Eyes (foreign body and infection)	74
Influenza	70
Minor external infections	55
Exanthemata	44
Fractures	33
Operations	35
Major	7
Minor	2
Tonsillectomy	26
Heart diseases	24
Eczema	24
Pneumonia	21
Appendicitis	15
Burns	15
Boils	14
Jaundice	12
Endocrine	10
Rheumatism	9
Chorea	7
Impetigo	8
No diagnosis	6
Nephritis	4
Typhoid	3
Poliomyelitis	2

The data constitutes an analysis of over 13,000 diagnoses and other phases of practice, such as x-ray, anesthetics, deaths, et cetera. An attempt was made to limit each consultation to one diagnosis. On account of lack of facilities for making diagnoses, many of these were withheld until after treatment.

A critical analysis of the above tables will be that of a typical cross-section of the general practice of medicine as it is seen in the country. One notes instances of the majority of morbid conditions to which human flesh is heir. To have administered thereto for many years, and under the limitations of rural handicaps, constitutes a story of trials and satisfactions which my city colleagues must have been denied.

PELLAGRA IN COLORADO*

WILFRED S. DENNIS, M.D.
DENVER

Seven cases of pellagra seen in Denver are reported briefly. Three occurred in private practice, and the remainder were observed in the wards of the Denver General Hospital. Following a report of six of these cases at a meeting of the Denver County Society last winter, the author was advised of the occurrence of several other cases in this locality. Undoubtedly, there are a few cases to be observed at almost any time in this territory the size of this state. The fact that six of the seven cases were seen during 1932-1933 suggests the advisability of reviewing the subject and calling the attention of the profession to an interesting problem.

Pellagra is described as an endemic disease characterized by a dermatitis beginning as a bilateral, symmetrical erythema on the exposed surfaces of the body, particularly the hands. There is desquamation, thickening, and atrophy, and the accumulation of pigment. The mucous membranes of the mouth and vagina, the surface of the tongue, and the digestive tract all take part in the irritation, and diarrhea is a common accompaniment, particularly early. There occur also certain nervous and psychic phenomena, ranging from slight confusion and depression to complete dementia. Apparently this disease has been seen at some time in most parts of the world, and doubtless, prior to its better understanding, it frequently had been diagnosed as some unusual form of syphilis, malaria, tuberculosis, hook-worm, or as a mental disease.

As early as 1600, attention was called to a peculiar malady with which the American Indians were afflicted which, in an incomplete way, resembled pellagra. It was thought to be associated with the use of corn, an important article of their diet. Some hundred years later, coincidental with the introduction into Spain of corn as an article of diet, cases resembling pellagra are reported. At the time the Declaration of

Independence was signed, the Venetian authorities were prohibiting the sale of spoiled or tainted corn in hopes of checking the ravages of this malady which they felt to be directly associated with corn as an article of diet. Early in the nineteenth century, pellagra appeared in France and was a matter of considerable concern for some sixty years, after which it seems to have receded rapidly. In England it has never been a serious problem. In Yucatan, some fifty years ago, a crop failure made it imperative to import food. One of the principal articles brought in was corn shipped as ballast from American ports. Because of the exposure of the corn to heat and moisture it was really unfit for food, but so severe was the famine, that it was dispensed to the poorer classes with resulting illness and great numbers of pellagrins. The pellagra subsided with the gradual improvement in foods and then reappeared ten years later when it became necessary to repeat the same procedure. By the close of 1907, 10 per cent of the inhabitants were the victims of pellagra. In the United States during the Civil War, and particularly in Andersonville and Libby Prisons, many of the deaths have been attributable to pellagra. Corn again figured as the main article of diet. By 1909 pellagra had become a serious problem in the South, where as a matter of fact, it still constitutes a major health problem. Since then we have heard repeatedly of the diet of corn bread, sugar cane, and pork.

The specific cause of pellagra is not known and has furnished the material for much speculation. For years it was taught to be intimately associated with corn or maize, particularly stale or spoiled corn bearing some specific infection, and Niles, from whom the brief historical data were drawn, states that to weave a history of pellagra without encountering the visage of maize seems almost impossible. Following the appearance of pellagra in endemic form through the South, consensus of opinion led to the assumption that any exclusive carbo-

*Dr. Dennis has an extensive reference list upon Pellagra. It will gladly be supplied upon request.

hydrate diet, and particularly cane sugar, would tend to the development of this syndrome. This idea was given considerable impetus when Goldberger produced six cases of pellagra from a total of eleven convicts in the Mississippi State Penitentiary by feeding a dominantly carbohydrate diet, free from animal protein, and made up principally of white flour, corn meal, cornstarch, white rice, cane sugar, cane syrup, sweet potatoes, et cetera. He concluded that pellagra was caused by amino-acid deficiency, faulty mineral supply or constitution, and an as yet unknown (vitamin) factor. Several years later, while working with others, Goldberger came to the more definite conclusion that the primary dietary defect related to pellagra was a deficiency in a factor designated as P. P., or the pellagra preventive, found where vitamin B is normally present—i. e., in beef muscle, wheat germ, tomatoes, cowpeas, and yeast. Jobling, however, did not feel that the experiments of Goldberger necessarily disprove the possibility that pellagra may be due to an infectious agent, largely because of the known effect of a high carbohydrate diet on the intestinal flora. Nor does he

subscribe to the theory that pellagra is essentially a deficiency disease in the same sense as beriberi or scurvy. He was able to isolate a fluorescent fungus from the intestinal tracts of individuals with pellagra, not found in non-pellagrous controls, and felt, as a result, that the production and absorption of photo-sensitive substances formed by flora on a favorable medium is an essential part of the etiology of pellagra. Prior to this report of Jobling's, the Thompson Pellagra Commission had studied the epidemiology of a large group of cases of pellagra in South Carolina, and found that from the time of their observations practically all the new cases of pellagra in that community developed while the person was residing in the same house with, or next door to, a pellagrin in the active stage of the disease, or within six months after such an exposure. It was further noted that after the installation of a proper sewage system, the spread of the disease was almost entirely arrested. Harris believes that the soil, referring to the medium in the intestines, is prepared for infection by high carbohydrate diets, particularly cane sugar products, and that this unknown infection is the essential etiological factor in pellagra. He infers that the lack of such an infectious agent explains the absence of pellagra in the war-torn countries of Europe where, during the World War, a large percentage of the population had been existing on a high carbohydrate diet.

In spite of the apparent contradictions in the opinions of various investigators in this field, one can see at a glance that, after all, these various factors may be closely related. Unbalanced diets, whether due to willful and self-imposed restrictions, or because of obstructive or other lesions of the digestive tract interfering with normal food intake, also unfavorable economic conditions affecting food consumption, can lay the foundation for changes in the intestinal medium making it possible for flora to change as Jobling suggests, or for some definite infection of a contagious nature to secure a foothold. However, it is difficult to explain on any grounds the occurrence of isolated pel-



Typical gauntlet skin lesions with deep pigmentation and considerable desquamation. From Case 1.

lagra on seemingly normal diets, and such cases apparently do occur.

CASE 1

An undersized, undernourished, white female of 22 years was seen first in 1925 because of weight loss, anorexia, nausea and vomiting, weakness and insomnia. She had developed very definite notions about what she could eat and had been in the hospital on three subsequent occasions for the same complaints. On the last visit to the hospital, September, 1929, she was having diarrhea and mild though definite mental disturbances. She returned home after forced feedings and, having failed to improve, was finally admitted to the Colorado General Hospital in December, 1929, after having been found in a tree garbed only in her night dress. At this time she had widespread skin lesions including elbows, shoulder blades, and buttocks, as well as the usual symmetrical dermatitis of the hands and collar-like lesions of the neck. Apparently she had been suffering from the early manifestations of pellagra in September, but they were not recognized. Appropriate treatment resulted in complete relief and a year ago I had a card from her saying that she was well and working after a period of invalidism extending over five years.

CASE 2

A white male 67 years of age was seen at the Denver General Hospital in March, 1932. Complaint, digestive disturbances and increasing jaundice for six weeks. Six months earlier, hands had begun to burn and itch followed shortly by a similar condition of the face and neck. At about this time he had some irregular diarrhea. When first seen there was gauntlet pigmentation on backs of hands and wrists with areas of atrophy. Neck and face, also deeply pigmented. He had been eating doughnuts and hot cakes with syrup for a year or more as his principal diet. He was treated symptomatically as a malignancy, dying two months after admission. There was little change in the manifestations of pellagra. Autopsy showed chronic cholelithiasis, obstruction of common duct with a calculus, and a purulent cholangitis.

CASE 3

A colored female 48 years of age was admitted to the Denver General Hospital April, 1932, in coma. There were acute lesions of butterfly shape over nose and cheeks, glove-like acute lesions of backs of hands and wrists, and inflammation of lips, tongue, and gums. Diarrhea. The head was retracted and the skeletal muscles spastic. Pulse, rapid. Temp., 104.5. Spinal fluid, under pressure, increased cells, no organisms. Leucocyte count, normal. Died forty-eight hours later. History of alcoholism. Autopsy showed only the presence of many petechial hemorrhages throughout the white matter of the brain.

CASE 4

White female of 72 years referred by Dr. Kennedy, Limon, May, 1932, gave a history of acute gall-bladder colic four years ago and gaseous indigestion for years. For two months, steady weight loss incident upon vomiting of meals. Ten days before, coming to Denver the tongue became very sore and a discoloration occurred on the backs of the hands with burning and itching. Slight diarrhea. On examination, the backs of the hands were purplish and swollen, tender to touch with beginning fine desquamation. The discoloration was sharply demarcated between the fingers—resembling a severe sunburn. The mucous membranes of the mouth and vagina were

red and inflamed and those of the rectum congested. X-ray demonstrated obstruction just beyond the duodenal cap. After several days preparation, Dr. H. R. McKeen opened the abdomen and performed a gastro-enterostomy. There were heavy adhesions between the gall-bladder and duodenum. A small gland removed showed malignancy. Three days postoperative, patient became irrational and died exhausted seven days later.

CASE 5

Mexican male of 68 years, admitted to Denver General Hospital July, 1932. He had been found starving in a shack down along the Platte river. Typical skin lesions of pellagra showed on hands and face. He died two days later. Autopsy revealed an obstructing carcinoma of the pyloric region of the stomach.

CASE 6

White male of 67 years admitted to Denver General Hospital in May, 1933, presented sore mouth and tongue and a recent dermatitis of the backs of both hands and neck. Except for a greatly reduced food ration, which had not been dominantly carbohydrate, there was no history of a contributing factor, the patient stating that he had been enjoying good health. After a few weeks on appropriate diet he was allowed to leave the hospital much improved in the external manifestations of pellagra.

CASE 7

White male 52 years of age was referred from New Mexico, June, 1933. Last November, after a protracted period of alcoholism, he was taken with diarrhea and redness and soreness of hands and lips. He had lost weight, was highly nervous and easily fatigued, and had become so irresponsible that he was losing his law practice and alienating his friends by his unusual conduct. At time of examination, backs of hands were rough and scaling with increased pigment and areas of atrophy. The neck was scaly and pigmented. There was much desquamation and soreness of lips. He had been receiving opiates in order to sleep. Advised of his condition and its probable cause, he became a very cooperative patient and a recent note states that he has gained 20 pounds and is very much improved.

It will be noted that the cases reported fall into groups with a common contributory factor. For instance, cases 1 and 5 were subject to diet restrictions, one of the willful type, the other due to economic factors. Carley reported a case almost identical to case 1. O'Leary collected 44 cases of pellagra in the Northwest, and divided them into six groups, one of which, comprising about half of the total cases, was made up of those who willfully attempt to exist on unbalanced rations. Cases 2, 4, and 5, are of a type that have been reported many times. Bender called attention to pellagra secondary to obstructive lesions and reported a cure following gastro-enterostomy for obstructive ulcer of the stomach. He mentions a case by Rolph associated with carcinoma of the stomach and another by

Bryan of ulcer in which an existing pellagra was cured by operation. O'Leary has reported five cases of pellagra developing after, or concomitant with, lesions of the digestive tract. He suggested that they be called "secondary pellagra." Crutchfield analyzed the dermatological lesions of 116 cases of pellagra, and remarks on the frequency of a contributory factor, and states that most patients give a history of some specific disease suggesting that pellagra is often a secondary condition. Eighty-five per cent of his cases showed some definite pathological condition which might be considered as contributory, and in more than 54 per cent, there was some concomitant pathological process which equalled or overshadowed the pellagra syndrome. Incidentally, he found but one instance where more than one case had occurred in a family, an observation for those who advocate an infectious etiology to reconcile.

Cases 3 and 7 were in alcoholics, a circumstance in which proper food intake is very seriously disturbed. Case 3 introduces an interesting finding of cerebral petechia. Autopsies, that have been performed at the Denver General Hospital on persons dying from the effects of drinking various alcoholic concoctions, have failed to establish any particular or outstanding pathological finding. While petechiae have been seen, their specific etiology has not been established. Singer and Pollock have studied the brains of fourteen pellagrins and concluded that pellagra gives rise only to a central neuritic reaction in common with other intoxications, and without evidence of local infection, or anything that could be interpreted as a specific reaction to the pellagra toxin. Alcoholism can explain the pellagra, but the lesions in the central nervous system must be left without particular comment.

There has been a tendency to call such cases as have been reported "pseudo-pellagra." It seems proper to protest on the grounds that as yet the etiology of pellagra has not been definitely established, and until it is, nothing is gained by attempts to divide pellagra from pseudo-pellagra.

The correction of faulty or unbalanced diets is the essence of the treatment of pel-

lagra. Where organic lesions exist surgery is indicated and the prognosis is good providing the patient is not of advanced years, is not an alcoholic, and does not exhibit advanced mental symptoms. A diet which contains an abundance of protein is universally recommended—at least one helping of meat, two to four eggs daily, and one to two quarts of milk. Liver should always be included, and the pernicious anemia diet is recommended, also large quantities of fruits and vegetables, a moderate amount of carbohydrate, and the vitamin B rich yeast. In relation to diets, it is interesting to note that on one occasion Greer, and on another, Guthrie, reported the appearance of pellagra following the institution of a ketogenic diet for epilepsy. Both were promptly relieved by a change in diet.

While arsenic, particularly in the form of sodium cacodylate, has had wide use in the South, careful observers doubt its value. Dilute hydrochloric acid may aid digestion and improve diarrhea. For the more violent diarrheas, bismuth and opium are recommended. Sedatives may aid in the control of nervous symptoms. Quite recently Sabry of Cairo, Egypt, has highly stressed the value of sodium thiosulphate used intravenously in 10 per cent solution. He believes that it neutralizes the toxin of pellagra, and since he has observed the fading of the skin pigmentation, deduces that the pellagra toxin cannot differ materially from the mother substance of skin pigment. Smith has pointed out that a lack of cystine, a sulphur containing amino-acid, may have a specific relation to the etiology of pellagra. He draws attention to the fact that cystine is contained in the foods recommended by Goldberger as preventives of pellagra, and that they contain cystine, or sulphur, in proportion to their value as preventives. Since thiosulphate liberates sulphur dioxide in the body, Sabry's results may be due to the effects of sulphur, and if so, he is ably supporting the dietary therapy.

Current thought as to etiology indicates that unbalanced diets are of prime importance, but whether this accounts for vitamin deficiency, or a medium for infection, has not been agreed upon.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Encephalitis*

The recent epidemic began in St. Louis County, the first case being found on July 16, with scattering cases on the 21st, 25th, and 27th. These were all mistaken for typhoid. The summer was the hottest and driest St. Louis had ever known and great swarms of mosquitoes were reported in every district, originating in the stagnant pools that were formerly water courses. Only 5.38 inches of rain fell compared to the normal, 13 inches.

When examination definitely ruled out typhoid, several physicians from St. Louis who were asked to investigate, among these Dr. Hempelmann, prominent St. Louis pediatrician, immediately diagnosed the disease as encephalitis although differing in many particulars, as will be seen below, from the type that has prevailed in the country since 1918. From July 16 to October 4 there were reported in St. Louis County and the city of St. Louis 1,000 cases, or one to every one thousand inhabitants. In only ten instances in the entire epidemic were there more than one case in a family.

The epidemic spread along the main routes of travel in an entirely unknown manner, although mosquitoes have been incriminated from the first as vectors of the disease. This probability is being investigated intensively by all the health services of the city, state and federal. All classes of society have been involved; persons confined to institutions, who have never been out of their rooms, have been stricken. All ages are involved, from young infants to persons 85 years old. Taking the groups by decades:

8 deaths per	100,000 up to 40 years
24 deaths per	100,000 up to 40-50 years
52 deaths per	100,000 up to 50-60 years
66 deaths per	100,000 up to 60-70 years
127 deaths per	100,000 up to 70-80 years
187 deaths per	100,000 up to 80-90 years

*Notes on St. Louis epidemic of encephalitis from the address of Dr. David P. Barr, Professor of Medicine, Washington University Medical School, delivered at Kansas City, October 4, 1933, before the Eleventh Annual Fall Clinic Conference of the Kansas City Southwest Clinical Society.

Symptoms

In many there is a three day onset, the temperature reaching 105-107 degrees. There is tremor of the lips, tongue, face and hands, exaggerated reflexes, a positive Babinski, rigidity of the neck in all cases, bradycardia in many. The spinal fluid has been examined in every case, the cell count averaging 208 of which 85 per cent are lymphs. The pressure and the sugar are increased, the latter running from 40 to 136 mg. The blood examination was of no help in diagnosis, the white cell count running from 3,800 to 27,000, the average being about 10,000. The Schilling count was normal. The urine was normal in some cases but in many there was a three plus albumen with white and red cells present.

Death has occurred within forty-eight hours. In mild cases the onset was marked by sudden array of prostrating symptoms such as vomiting, headache, high temperature, great dehydration, a red throat and at least 100 cells in the spinal fluid. One-half of the cases have had a chill, about one-half have had vomiting, and six cases of 300 in the isolation hospital had convulsions in the stage of invasion. Remissions have been common. Cerebral involvement has occurred in all but a very few cases. There has been photophobia in many and a rigidity of the neck in 87 per cent; Kernig's sign in 68 per cent; diplopia fairly common and strabismus in only 7 per cent. The Oppenheim-Gordon was common. The tremor was present in all and the mental state varied with the case, coma coming on very late. Delirium was as common as in alcohol poisoning; there was slow response to questioning. In some there was a hyperglycemia with a high sugar content in the spinal fluid. The disease may terminate by crisis or by lysis and the stupor lasts longer than the fever. In uncomplicated cases there was recovery in from seven to ten days, but the spinal cell count remained high even after discharge.

The mortality was 20 per cent. All prognostic signs failed but early coma was a serious manifestation. Under forty years the mortality was 5 per cent, while over sixty years it was 60 per cent. Ten per

cent of the cases died without complications. The chief complications were bronchitis, broncho-pneumonia, lobar pneumonia, and nephritis. In 35 per cent of these cases the disease has been complicated by pre-existing chronic ailments. Where recovery occurred there are no residuals, at least 90 per cent, but tremor or paralysis may persist and delirium may occur for seven weeks.

Pathology

Dr. Margaret Smith found in the kidney certain inclusion bodies which, while significant, have not yet been identified. The brain shows all meningeal veins greatly distended; there are blood cells throughout the subarachnoid space and hemorrhage in all parts of the brain stem with round cell collections about the vessels and areas of focal necrosis. The cortex is not spared but there are no lesions in the mid-brain. The lungs frequently show pneumonia of the hemorrhagic type found in "flu;" in the kidney there is congestion of the pelvis and involvement of the parenchyma. Treatment has thus far been symptomatic.

This epidemic has been compared to a similar one in Japan occurring in 1924 where there were 7,000 deaths and which has been known as encephalitis B., to distinguish it from encephalitis A., the common type. The Japanese epidemic spread in August and September after a very hot summer; there were very few of those who recovered who remained permanently injured and only one case of generalized or Parkinsonian involvement.

Control of Tuberculosis

Notwithstanding the fact that the dangers of continued massive infection are generally known and thoroughly realized, Chicago is as far as we know at present the only city or community in the world that legally enforces protection of the children, and compels isolation of the non-cooperative infectious case. Smallpox cases, scarlet fever, and diphtheria cases are isolated, forcibly hospitalized when necessary. The open case of tuberculosis alone, the individual who broadcasts his two and one-half million germs a day, is allowed to go his way, unhampered and unsupervised, sowing

in the highways and byways his seeds of tuberculosis. The measures of control, which are administered efficiently and humanely in Chicago are as follows:

CARRIER CONTROL REGULATIONS

1. It is unlawful for the open case, or individual with germs in his sputum, to reside in the same house with children under sixteen.

2. To break the contact, either the tuberculous individual or the child, or children, must leave the home. The tuberculous individual may go to a sanatorium or institution, or reside elsewhere where there are no children; the child may go to a preventorium or reside with relatives in a home where there are no tuberculosis cases.

3. Forcible hospitalization. The non-cooperative carrier, or infectious case, as a last resort, may be forcibly hospitalized in an institution.

4. One hundred infectious cases of tuberculosis, or carriers, are housed and cared for at the Municipal Home, a branch of the Municipal Tuberculosis Sanitarium.

5. Control of the carrier by mechanical isolation, through the medium of collapse therapy. By collapse therapy, as will be explained later, we mean the artificial compression of the lung in such a way as to promote healing. Approximately 50 per cent of carriers, or open cases, may be rendered harmless by this procedure. Clinics for collapse therapy are held, both at the Sanitarium and Dispensary departments, and have a total registration of 1044 patients.—From City of Chicago Municipal Tuberculosis Sanitarium Bulletin, Vol. 12, Nos. 7-12.

Transients as Sources of Infection of Syphilis

The Bureau for Men of the Denver Department of Health and Charity says: "Fully one-fourth of the transients who apply to the Bureau for assistance claim to have either a latent or active venereal infection."

The Health Division, Department of Public Welfare, St. Louis, reports, "We have had quite a number of destitute boys who have applied to our clinic for treatment for venereal infection. The treatment is promptly given as well as advice on the consequences that will occur if they are not given attention regularly."—From "Social Hygiene News," August 15, 1933.

Diphtheria

The very excellent studies made by Godfrey of the influence of diphtheria immunizations on diphtheria mortality indicate that at least 30 per cent of young children must be immunized before a significant reduction in the diphtheria death rate is effected.—From American Journal of Public Health, August, 1933.

BOOK REVIEWS

An Outline of the Treatment of Fractures. By the Committee on the Treatment of Fractures. Second Edition. Revised and Amplified. 1933. Chicago: American College of Surgeons.

This booklet of forty pages was compiled by a Fracture Committee of the American College of Surgeons. Thirty-eight of the leading surgeons and orthopedists of North and South America composed this committee. This in itself is sufficient to make every medical man realize the value and importance of this booklet. It is not designed to take the place of text books on fractures but to emphasize the underlying general principles involved in the handling of fractures and to impress these principles upon those who attempt to handle or treat them.

There are twenty-four aphorisms with which every medical man and those who render first aid should commit to memory. The book should be presented to every intern in our hospitals.

H. R. McKEEN.

Fractures. By Paul B. Magnuson, M.D., Associate Professor of Surgery, Northwestern University Medical School, Chicago. 317 illustrations. Philadelphia, Montreal, London: J. B. Lippincott Company. 466 pages, price \$5.00.

This is a new book on fractures in which the author presents, in a very clear and readable style, his views on the treatment of fractures. He presents the methods of treatment which he has found to work most satisfactorily in his practice. However, he does not neglect to describe or mention the procedure of others who choose to offer a different procedure.

The first page of his book is captioned "High Lights." Ten absolutely essential "do's and don't's" in the management of fractures might have been increased to double the number, but they should be known by every medical man and first aid attendant who treats bone injury.

Almost every possible fracture is discussed with a method of handling it "which works," as the author states. Fractures of the jaw are not discussed; the author believes that this fracture is best treated by the oral surgeon—an opinion with which most surgeons will agree. Much stress is laid by the author in adapting treatment to physical laws, a knowledge of direction of muscle pull and type of fracture being essential to the proper application of traction and reduction.

The treatment of fractures of the bones of the hands and feet are well presented—their importance emphasized, especially to the man who must make his living with his hands. In the treatment of intracapsular fracture of the head of the femur, after presenting the so-called standard methods and operative treatment, the author presents his own operation which apparently is an improvement on some of the older procedures. The chapter dealing with fractures of vertebrae and compression fractures is excellent, and the most approved methods are carefully described and well illustrated. In "Fractures of the Skull" he advocates the approved method of rest, dehydration, spinal drainage, and limitation of fluid intake, a routine which undoubtedly has reduced the mortality of head injuries.

The chapters on therapeutic exercises, physiotherapy, massage, and methods of reduction of injured parts designed to restore the injured to

his place in the working world are clear, practical, and not too voluminous. They are well illustrated.

The book is one of the most practical ones on the subject of fractures. The surgeon and orthopedist who treats many fractures will undoubtedly get many simple and practical new ideas. The physician who treats only an occasional fracture will learn how to handle it correctly.

H. R. McKEEN.

Clinical Physiology of the Eye. By Francis Heed Adler, M.A., M.D., F.A.C.S. Instructor in Physiology and Ophthalmology Medical School, University of Pennsylvania, Assistant Surgeon, Wills Hospital. New York: The MacMillan Company. 406 pages, price \$5.00.

Until the publication of this book, when one wanted to study the physiology of the eye it was necessary to refer to sadly incomplete chapters in books on physiology, psychology, or ophthalmology, or to the original literature. Now for the first time, as a result of a suggestion from Dr. Edward Jackson, this material has been brought together in one book. The text and the not too ponderous bibliography at the end of each chapter make this book a most valuable reference work. The book is well arranged and not too technical for easy reading.

R. W. DANIELSON.

Practical Obstetrics for Students and Practitioners. By P. Brooke Bland, M.D. Professor of Obstetrics, Jefferson Medical College; Chief Obstetrician, Jefferson Medical College Hospital, Philadelphia, Penna. Assisted by Thaddeus L. Montgomery, M.D. Associate in Obstetrics, Jefferson Medical College, Philadelphia, Penna. Illustrated with 516 engravings, including 21 colored plates. Philadelphia: F. A. Davis Company, Publishers. 1932. 730 pages, price \$8.00.

There are several recently published new editions of standard text books in obstetrics, but there exists a definite demand for a work in practical obstetrics when written by such a capable scholar and teacher as the author of this book. The outstanding features of this work are the excellent style and the brief and concise manner in which this author expresses himself. There is practically no repetition in the various chapters, and the pictures and semidiagrammatic plates are excellent. There is very little extraneous material in the whole book.

The author has confined himself entirely to obstetrics or its related obstetrical gynecology. The chapters upon operative obstetrics are fairly brief but adequate and have the usual excellent maneuvers. There is a brief but thorough chapter upon obstetrical jurisprudence which will be appreciated by any busy practitioner or consultant.

The author is to be commended for directing the profession's attention to the appalling high rate of abortions occurring in our own and foreign countries each year, many of which are criminally induced. He quotes Germany as having, according to one writer, a total of 500,000 to 800,000 abortions a year including all types. Furthermore he quotes Soviet Russia in 1922-1925 as publishing 55,320 authorized abortions performed in hospitals without any recorded maternal deaths. Whereas, during this same period of three years in Russia 66,675 illegal operations were committed with a mortality of 3,000 mothers. The death rate in the United States is appalling from criminal abortions, hence it seems that Russia may have given us a new challenge in future state medical channels to work out some solution to

prevent this ever present evil of criminal abortions upon our young American women.

The chapter upon toxemias of pregnancy is quite comprehensive in which the author wisely urges careful and strict prenatal regime to prevent or detect early toxemic symptoms. However, if eclampsia has occurred, he advises with considerable prudence that the obstetrician refrain from trusting to surgical interference, but urges immediate rest and dehydration with magnesium sulphate or glucose solution intravenously, as giving much more favorable chances for the mother. It is commonly agreed among the larger lying-in centers that severely eclamptic patients are poor surgical risks. There is a splendid bibliography, in the rear of the book, which will be much appreciated by the student or the specialist.

M. C. JOBE.

The Medical Clinics of North America. (Issued serially, one number every other month) Volume 16, No. 6. (Mayo Clinic Number—May, 1933) INDEX NUMBER. Octavo of 239 pages with 28 illustrations. Per clinic year, July, 1933, to May, 1933. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The May number of the Medical Clinics of North America is from the Mayo Clinic and is the index number for the current year. It contains interesting reports on Diabetic Acidosis and Coma, Hypotension, Gout, and Paranephritic Abscess. The reports on digestive diseases are particularly interesting, there are included two clinics on colitis that are very practical and of interest to physicians in almost all fields of practice. A review of the Sedimentation of Erythrocytes and a discussion of Thallium Poisoning bring some of the newer developments of internal medicine to the attention of the readers.

L. W. KRANK.

Medical State Board Examinations. Topical summaries and answers. An organized review of actual questions given in medical licensing examinations throughout the United States. Harold Rypins, A.B., M.D. Secretary, New York State Board of Medical Examiners; Member, National Board of Medical Examiners; Associate in Medicine, Albany Medical College; Former President, Federation of State Boards of Medical Examiners of The United States; Former Instructor in Medicine, University of Minnesota. Philadelphia. Montreal. London. J. B. Lippincott Company. 448 pages, price \$4.50.

In the preface, Dr. Rypins very plainly sets forth his opinions after ten years experience as Secretary to the New York State Board of Medical Examiners. He makes it very clear that he thinks the average recent graduate is well qualified to practice his chosen profession and should not begin his examinations with fear. Medical examiners on the other hand, should ever bear in mind the fact that their function is only to see if the candidate is a person who is properly qualified to administer to the citizens of his state.

Dr. Rypins has covered the subject very concisely and quite fully from a practical standpoint. The questions taken as they are, after a survey of many thousands from various sections of the country, show unmistakably the trend of thought of the various examiners.

To any one interested in state board examinations, this book should be of great value.

E. B. SWERDFEGER.

Reminiscences. By George Henry Fox. New York: Medical Life Press, 1926.

George Henry Fox will be recalled by many as one of America's pioneers in dermatology. This volume was presented to the library at the instigation of some of our members who have heard the genial octogenarian recount personally many of the tales included in the book.

The reminiscences, beginning in 1846, extend over that period in history which witnessed so many revolutionary changes in medical ideas and practices. The volume is not limited to medical subjects primarily, but its experiences and philosophy cover the realm of births, marriages, deaths, arts, war, peace, events here and abroad. In fact, life itself flows through this book with a vein of kindly humor, the reading of which will prove a delightful source of entertainment to our readers.

Reminiscences is a distinct addition to our non-medical book shelf.

O. S. PHILPOTT.

The History of Dermatology. By Wm. Allen Pusey, A.M., M.D., LL.D. Professor of Dermatology Emeritus, University of Illinois; Sometimes President of the American Dermatological Association and of the American Medical Association. Illustrated. Springfield, Illinois. Baltimore, Maryland: Charles C. Thomas. 1933. 223 pages, price \$3.00.

In this book of 223 pages the author gives an outline of the history of dermatology beginning with the references to skin diseases in the earliest medical writings of the Egyptians and the Greeks and following through the various writings until the beginning of the nineteenth century when dermatology was becoming a definite specialty.

During this period of development until the present time, the author gives us the important advances and short, but interesting, biographies of the physicians who have been outstanding in history for their contribution to the advancement of dermatology.

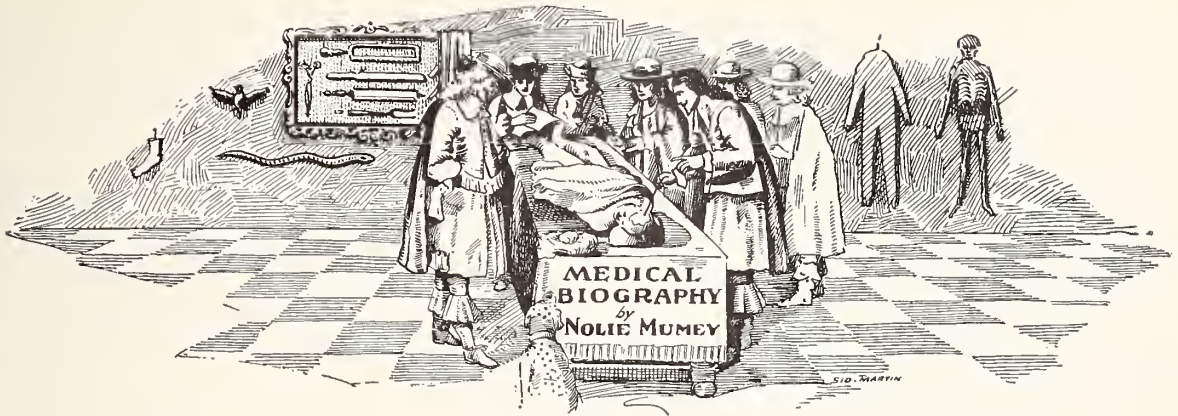
The last 47 pages of the book is an historical index of dermatology in which are listed alphabetically the different diseases of the skin, the date, and the author first describing the condition.

This small book written by one of the outstanding American dermatologists and dedicated to the younger generation in whose hands lies the future of dermatology, gives a brief review of the present knowledge of diseases of the skin and not only challenges, but also inspires the present and future specialists in dermatology to carry on the progress of clinical observation and scientific research in this branch of medical science.

JACK G. HUTTON.

Chronic Arthritis and Fibrositis. By Bernard Langdon Wyatt, M.D., F.A.C.P., Director the Wyatt Clinic; formerly President and Director the Desert Sanatorium and Institute of Research, Tucson, Ariz. Pp. 200, with 17 illustrations. Cloth. Price, \$3.50. William Wood & Co., division of Williams & Wilkins Co., Baltimore.

Offers guidance along sensible well-proved lines, covering diagnosis, general principles, and practical details of those methods of treatment which have been found most helpful. As a cause of disability rheumatism ranks second to accidents in most cities, and twice as high as tuberculosis. Yet Dr. Wyatt says our knowledge of etiology, pathology, differential diagnosis and therapy of chronic joint diseases is adequate to banish most of the suffering and disability.



SILAS WEIR MITCHELL

(Continued from October Issue)

Many of Dr. Mitchell's beautiful lyrics describe the out-of-doors. In these poems a rare feeling of nature combined with a vivid description make them a source of inspiration to the reader.

GOOD-NIGHT

Good-night. Good-night. Ah, good the night
That wraps thee in its silver light.
Good-night. No night is good for me
That does not hold a thought of thee.
Good-night.

Good-night. Be every night as sweet
As that which made our love complete,
Till that last night when death shall be
One brief "Good-night" for thee and me.
Good-night.

Another one of Mitchell's lyrics which was inspired by the garden of the Armenian Convent at Venice expresses the rare gift of a true poet.

TO A MAGNOLIA FLOWER

I saw thy beauty in its high estate
Of perfect empire, where at set of sun
In the cool twilight of thy lucent leaves
The dewy freshness told that day was done.

Hast thou no gift beyond thine ivory cone's
Surpassing loveliness? Art thou not near—
More near than we—to nature's silentness;
Is it not voiceful to thy finer ear?

Thy folded secrecy doth like a charm
Compel to thought. What spring-born yearning
lies
Within the quiet of thy stainless breast
That doth with languorous passion seem to rise?

The soul doth truant angels entertain
Who with reluctant joy their thought confess:
Low-breathing, to these sister spirits give
The virgin mysteries of thy heart to guess.

What whispers hast thou from yon childlike sea
That sobs all night beside these garden walls?
Canst thou interpret what lark hath sung
When from the choir of heaven her music falls?

If for companionship of purity
The equal pallor of the risen moon
Disturb thy dreams, dost know to read aright
Her silver tracery on the dark lagoon?

The mischief-making fruitfulness of May
Stirs all the garden folk with vague desires.
Doth there not reach thine apprehensive ear
The faded longing of these dark-robed friars?

When, in the evening hour to memories given,
Some gray-haired man amid the gathering
gloom
For one delirious moment sees again
The gleam of eyes and white-walled Erzeroum?

Hast thou not loved him for this human dream?
Or sighed with him who yesterevening sat
Upon the low sea-wall, and saw through tears
His ruined home and snow-clad Ararat?

If thou art dowered with some refined sense
That shares the counsels of the nesting bird,
Canst hear the mighty laughter of the earth,
And all that ear of man hath ever heard.

If the abysmal stillness of the night
Be eloquent for thee, if thou canst read
The glowing rubric of the morning song,
Doth each new day no gentle warning breed?

Shall not the gossip of the maudlin bee,
The fragrant history of the fallen rose,
Unto the prescience of instinctive love
Some humbler prophecy of joy disclose?

Cold vestal of the leafy convent cell,
The traitor days have thy calm trust betrayed;
The sea-wind boldly parts thy shining leaves
To let the angel in. Be not afraid!

The gold-winged sun, divinely penetrant,
The pure annunciation of the morn
Breathes o'er thy chastity, and to thy soul
The tender thrill of motherhood is borne.

Set wide the glory of thy radiant bloom!
Call every wind to share their scented breaths!
No life is brief that doth perfection win.
Today is thine—tomorrow thou art death's!

(To Be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

New Work for the Nine Councillors

THE number of Councillor Districts was increased from five to nine by a constitutional amendment adopted by our House of Delegates at Colorado Springs. Hence the Society now has nine Councillors. The peacemaking and judicial duties of Councillors should be less arduous than heretofore, the duty of visiting each constituent society in his district each year less difficult for each Councillor to carry out.

There is another councillor function that in recent years has been largely forgotten—not through any lack of willingness on the part of these officers, more through lack of understanding, through lack of appeal by members and county society officers. Under the Constitution and By-Laws the Councillors are the “Organizers” of their districts, responsible for stimulating increased membership, for organizing new county societies where they are needed, for bringing disinterested members “back into the fold.” The President and the Executive Secretary are particularly charged under the By-Laws with the duty of assisting the Councillors in this part of their work.

The Colorado State Medical Society needs the membership of many physicians who are not now affiliated with organized medicine. The number of eligible prospects in the state is probably around the 300 mark. These men likewise need the services that this Society has to offer. They do not realize this fact, do not understand the advantages of membership, have not heard of Society services, or they would have come forward themselves, seeking membership.

November and December are ideal months in which to add new members. The new members gain one or two additional months of membership at the cost of only twelve months' dues, for one thing. County societies are just getting into their best season of programs and activities, for another. Several constituent societies now have memberships close to a figure which, if passed, would give them an additional member of the State Society's House of Delegates, and the date on which delegate apportionment is figured is December 31.

Officers of county societies, members generally, should keep their eyes and ears open for new members, bearing in mind that quality rather than quantity is sought, however. Call upon the Coun-

cillors for their help. They are ready and willing to give it, unstintingly. Invite your district Councillor to speak at your next meeting and get his advice on membership.

Committee Activities

THIS year it will be a policy of the “Secretarial Notes” section of Colorado Medicine to publish more details of State Society committee work than has been done before, under a recommendation of the House of Delegates. Members are therefore urged to watch these pages each month to learn what their committees are doing to advance the interests of the individual practitioner.

Within the last twelve months it has become apparent to the officers that many members realize but little of what goes on under the direction of the Society's many officers and committees. The expense of periodic bulletins to members outlining State Society activities would be prohibitive in these times, yet some way needs to be found to let all physicians know more about the tireless work put in by committeemen toward bettering conditions of practice, improving the economic position of doctors, protecting members from infringement of their rights and privileges. Much committee work is of necessity “behind closed doors” and cannot be published in a journal that must reach non-members, but much more can be published than has been in the past.

In the thirty days preceding this writing, meetings and conferences have been held by the committees on Scientific Work, Public Policy, Publication (two meetings), Medical Defense (two meetings), Medical Economics, Advisory to the School of Medicine, and Cancer Education (two meetings). Other meetings are under call. Reports from the chairmen of two of these committees are presented this month. Both are highly important. Read them, and watch for more next month.

New Admission System for Colorado General

REFERENCE to the report made by the Society's Advisory Committee to the School of Medicine before the House of Delegates at Colorado Springs will show that the majority of abuses in admission of patients to Colorado General Hospital were traceable to the doctors and county

commissioners who recommended them. Recommendations were made, and ordered to be followed, which should greatly reduce this abuse. One of these recommendations was for the introduction of a new application form to be signed by the patient.

Accordingly the Committee met on October 20 and gave formal approval to a form of questionnaire which the Committee had initiated and worked out with Dean M. H. Rees, and which in the future will be used by Colorado General Hospital for the admission of all patients, without exception.

A supply of these blanks (Form A) will be mailed to each physician in the state, on or before December 1. Since this application form is to be filled out by the patient himself (or his parent or guardian) the doctor will be relieved of clerical work in that regard. It will not even be necessary for him to approve the application under his own signature, unless he wishes voluntarily to do so. Accompanying the supply of Form A application blanks will be a short set of instructions for the physician, which he should keep on hand for reference at any time a patient applies to him for admission to Colorado General Hospital.

It is the belief of the Committee that this new form will go far to prevent imposition upon the Hospital and upon private practice. The physician will now be entirely relieved of any embarrassment which he might incur in refusing to recommend a patient, since the burden of the decision will not be with the physician (although he may recommend if he so desires), but can be passed on entirely to the Hospital. Ample provision is made for emergency cases to avoid "red tape" delay.

Special instructions are to be issued to county commissioners, for whom new county blanks in addition to the new Form A applications have had to be prepared.

It is requested that physicians refer to the transactions of the House of Delegates, which will appear in the December issue of Colorado Medicine, and note carefully the report of the Advisory Committee, so that they may be informed of the various accomplishments which have already been made in cooperation with the Hospital authorities toward elimination of abuses by ineligible applicants. There has been very little complaint of late with regard to the admissions to the out-patient department, and we see no reason why the Hospital admissions may not reach an equally satisfactory status.

Remember, the new form will:

1. Relieve the doctor of clerical work.
2. Relieve the doctor of the necessity of a direct recommendation of the patient.
3. Not deprive the doctor of the privilege of a voluntary recommendation.

4. Apply to all patients, whether indigent or part-pay, whether referred by a physician or by county commissioners.

Advisory Committee to the School of Medicine.

F. B. STEPHENSON, Chairman,
J. S. BOUSLOG,
T. D. CUNNINGHAM,
C. O. GIESE,
C. E. SIDWELL.

COMMITTEE ON CANCER EDUCATION

The Committee on Cancer Education, appointed at the last annual meeting of the State Society, has perfected its organization and will shortly be prepared to present to constituent societies, through four symposium teams, symposia on cancer of the breast. This will comprise both diagnosis and treatment, with special emphasis on early diagnosis.

The program consists of a five year plan, each year being devoted to tumors, particularly cancer, of various organs and systems. This year will be devoted entirely to cancer of the breast.

The plan is for each team, composed for the present symposia of a surgeon, a radiologist and a pathologist, to appear at some time during the year at a meeting of a constituent medical society. Where feasible, joint meetings of two or more societies will be held, as it would be impossible to cover the entire state during the year if this were not done.

The following have been chosen to comprise the four symposium teams for this year:

Surgeons: Drs. W. W. Haggart, Denver; H. S. Finney, Denver; J. B. Hartwell, Colorado Springs; and G. W. Bancroft, Colorado Springs.

Radiologists: Drs. K. D. A. Allen, Denver; W. W. Wasson, Denver; G. A. Unfug, Pueblo, and F. E. Diemer, Denver.

Pathologists: Drs. C. W. Maynard, Pueblo; W. S. Dennis, Denver; Josephine N. Dunlop, Pueblo; W. C. Black, Denver, and E. I. Dobos, Denver.

In view of the obvious importance of this program, and the considerable amount of work and time which has been and will be spent by the members of the symposium teams, it is earnestly requested that the secretaries of the constituent societies cooperate fully with the Executive Secretary in arranging meetings, and that each individual member make every effort to attend.

LYMAN W. MASON, Chairman.

MEDICAL SOCIETIES

BOULDER COUNTY

The regular monthly meeting of the Boulder County Medical Society was held at the Elks Club, Longmont, on Thursday, October 12. Drs. H. H. Heuston and John Andrew, delegates to the State meeting, reported on the meeting. Drs. Arnold Minnig and R. W. Whitehead of Denver were the guest speakers. Dr. Minnig discussed the "Practical Application of Endocrines in Medicine" and Dr. Whitehead presented "Some Laboratory Experiments in Endocrinology." Dr. John Andrew presented a case of "Malignant Tumor of Mediastinum."

The meeting was preceded by dinner.

M. L. JOHNSON,
Secretary.

CROWLEY COUNTY

Drs. G. M. Baker, W. M. Desmond, and E. O. McCleary presented the program at the regular meeting of the Crowley County Medical Society held in Ordway, October 11. Dr. Baker delivered a paper on "Pneumonia Treatment and Mortality as Compared With Forty Years Ago." Dr. Desmond gave a paper on "Tonsillitis, Its Cause and Treatment," Dr. McCleary, "Etiology and Treatment of Chorea."

J. A. HIPP,
Secretary.

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DENVER COUNTY

Two hundred and three members were present at the first October meeting of the Denver County Medical Society held October 3 at the Children's Hospital.

Doctors George Lucerne Pattee, Edward Rudolph Phillips, John Frances Harrington, George S. Postma, Samuel Parks Newman, Jr., Guy William Smith, Leonard Freeman, Jr., and George Eugene Mason, Jr., were elected to membership.

Dr. Paul Connor reported on an investigation made by the State Board of Health of the contamination and pollution of the South Platte river below Denver. Dr. Connor made a plea for the cooperation and support of the Society with the State Board of Health in this work. He made a motion that the chair appoint a committee headed by Dr. Beagler to support the State Board of Health's program, which may necessitate a sewage disposal plant to correct this condition.

Dr. Forbes made a further oral report of the Committee on immunization of newborn babies, infants and children of school age.

Dr. John Ruhrah, Professor of Pediatrics at the University of Maryland in Baltimore, presented a paper on "Poliomyelitis." Dr. Ruhrah began with references to the earliest pictorial and circumstantial evidence of that condition dating back to the time of the Pharos in Egypt. His talk was accompanied by a number of excellent slides.

Following the meeting, refreshments were served by the Children's Hospital.

The second October meeting of the Denver Society was held at St. Joseph's Hospital, October 17.

Dr. Louis Hough was elected to associate membership.

The scientific program was presented by members of St. Joseph's Hospital staff, Dr. Edward Delehanty presiding.

Dr. I. W. Philpott presented a paper on "The Use of Surgical Electro-Coagulation in Otolaryngology." The paper was discussed by Dr. C. H. Darrow and Dr. H. I. Laff.

"Encephalitis," was presented by Dr. R. J. Savage and discussed by Drs. T. D. Cunningham and L. E. Daniels.

Dr. G. E. Cheley presented a paper on "Cleft Palate." Dr. Leonard Freeman discussed this paper.

Dr. Duval Prey presented "Fracture of the Femoral Shaft," and Dr. Casper Hegner discussed the paper.

There were 182 members present at this meeting.

Refreshments were served by St. Joseph's Hospital.

O. S. PHILPOTT,
Secretary.

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EL PASO COUNTY

Mr. Harvey T. Sethman, Executive Secretary, was a guest at the regular October meeting of the El Paso County Medical Society held at the Day Nursery on Wednesday, October 11. Mr.

Sethman discussed the new Federal regulations involved in the Emergency Federal Funds.

Dr. W. C. Howell was the principal speaker on the scientific program. Dr. Howell presented a paper on "Hyper-Insulinism."

CARL S. GYDESEN,
Secretary.

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LARIMER COUNTY

Dr. George B. Packard of Denver was the guest speaker at the regular meeting of the Larimer County Medical Society held Wednesday, October 4, at the College Cafeteria, Fort Collins. Dr. Packard gave an interesting talk on "Surgical Abdominal Emergencies of Children."

DUANE HARTSHORN,
Secretary.

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MESA COUNTY

The regular meeting of the Mesa County Medical Society was held September 26 at Grand Junction.

Dr. G. C. Cary of Grand Junction gave a talk on "Malignancy of the Eye," and Dr. H. H. Ziegel of Collbran talked on "Malignancy of the Uterus."

H. M. TUPPER,
Secretary.

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NORTHEAST COLORADO

The Northeast Colorado Medical Society held its regular meeting at the city hall in Sterling. The business and scientific meeting was preceded by a dinner at the Marshall Cafeteria. Doctors Cuthbert Powell and E. G. Faber of Denver were guests of the Society.

After dinner adjournment was taken to the city hall where the guests gave discussions, Dr. Powell on the "Art and Science of the Practice of Medicine," and Dr. Faber on "Anesthesia." Both subjects were actively discussed.

Dr. F. J. Heck of the Mayo Clinic was introduced to the Society and invited to speak. The subject he chose was "The Anemias."

There were fourteen in attendance at the meeting besides the guest speakers of the evening. This society at present has a membership of nineteen.

E. P. HUMMEL,
Secretary.

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OTERO COUNTY

The regular meeting of the Otero County Medical Society was held at the Kit Carson Hotel in La Junta, October 12. Miss Ruth Phillips, Field Secretary of the Colorado Tuberculosis Association, was a guest speaker and discussed her work in Colorado with special reference to the work in Otero County. Dr. J. H. Woodbridge of Pueblo was a guest speaker and reported several cases of tuberculosis in children.

The regular meeting night of the Society was changed from the second Thursday of each month to the second Friday of each month. The next meeting will be held November 6 and the scientific program will be confined entirely to "Tuberculosis."

C. E. MORSE,
Secretary.

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PUEBLO COUNTY

The Pueblo County Medical Society held its regular meeting Tuesday, October 17, at the Hotel Congress in Pueblo.

Dr. G. P. Lingenfelter of Denver gave an interesting illustrated talk on "Dermatology for the General Practitioner."

Dr. J. S. Bouslog, Constitutional Secretary, and

Mr. Harvey T. Sethman, Executive Secretary, were guests at the meeting. Mr. Sethman discussed the new Federal regulations for payment of doctors, on a fee schedule basis, for medical services given families receiving funds from the Emergency Federal Relief Administration.

Mr. Frank Hoag, Jr., of the local relief committee, talked on plans for the medical care of transient indigents, and after discussion a Committee was appointed consisting of Doctors H. T. Low, W. T. H. Baker, and Royal H. Finney with power to act for the Society in making plans to bring about the care that the local committee is requesting.

J. L. ROSENBLOOM,
Secretary.

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SAN LUIS VALLEY

Drs. Robert G. Packard and O. S. Philpott were guest speakers at the regular meeting of the San Luis Valley Medical Society held October 7 at Alamosa.

The scientific program was preceded by a dinner at the Walsh Hotel.

Dr. Packard talked on "Compression Fractures of the Spine" and Dr. Philpott talked on "Syphilis."

A number of the members of the Society enjoyed a duck hunting trip the day following the meeting.

SIDNEY ANDERSON,
Secretary.

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WELD COUNTY

Dr. John Schoonover of Denver was the principal speaker at the regular meeting of the Weld County Medical Society held October 2 at Greeley. Dr. Schoonover gave an interesting talk on "The Mentally Deficient Child."

TRACY D. PEPPERS,
Secretary.

Obituary

Alpha Manly Chase

Dr. Alpha M. Chase was born in Aurora, Ill., in 1873. He came to Colorado as a boy and attended the public schools here. He received his M.D. degree in 1894 from the Gross Medical College.

Dr. Chase joined the Colorado State Guard, now the National Guard, in 1891. From 1900 to 1913 he was a contract surgeon and first lieutenant in the regular army and in 1913 became a captain in the National Guard. He served through the Boxer rebellion, Philippine insurrection, and the World War.

Dr. Chase was a member of the American Medical Association, the Colorado State Medical Society, the Henry W. Lawton camp of United Spanish War Veterans, the Francis Brown Lowry post of the Veterans of Foreign Wars and of the Leyden-Chiles-Wickersham post of the American Legion.

Dr. Chase died October 6 of a heart attack. He is survived by his wife and a son in Denver, three children by a former marriage in California, and six brothers.

Henry John Becker

Dr. Henry J. Becker was born in Germany in 1891. He received his medical degree from the St. Louis College of Physicians and Surgeons in 1920. Dr. Becker practiced in Sterling, Colorado, since 1926. He has been a member of the Northeast Colorado Medical Society and the Colorado State Medical Society since that time.

Dr. Becker died September 26, 1933, and was buried at Jackson, Minnesota.

Marnin Warren Reed

Dr. M. W. Reed was born in Barree, Pennsylvania, in 1876. He received his preliminary education at Franklin Marshall College and his Medical degree from the Jefferson Medical College in 1903. Dr. Reed also did postgraduate work at Harvard Medical School.

Dr. Reed served in the World War and was in charge of a hospital train in France. While in France Dr. Reed was gassed. In 1929 he came to Colorado for his health and began his practice in Denver. Since that time Dr. Reed has been a member of the Medical Society of the City and County of Denver and of the Colorado State Medical Society.

Dr. Reed is survived by his wife and two children.

WOMAN'S AUXILIARY

REPORT OF THE COMMITTEE ON PHYSICIANS' BENEVOLENT FUND

The following report and tentative plan, as approved by the Board of Trustees of the State Medical Society of Colorado, was read at the Annual State Meeting at Colorado Springs, September 15, 1933. Although the idea of such a fund had been discussed at the meeting in 1932 and a committee appointed to investigate and formulate plans, there seemed to be considerable lack of knowledge regarding such funds, the handling of them, and their ultimate success. Owing to the small representation throughout the state, it was suggested that a copy of the plan be sent to each County President for consideration in her County.

The following plan was not adopted as a whole, partly because of lack of funds in the County treasuries, but a motion was carried to establish a fund by setting aside \$100.00 from the State Treasury, plans for increasing the same to be decided upon at a late meeting. Many states have already taken the lead in this activity, realizing the importance of providing for our own.

The physician's life, knowledge, money, and family are devoted to benevolence, and many times great need is felt by those remaining when he lays down his work. How great must be their relief when they know there is a source to which they have contributed, to which they may apply without humiliation for temporary assistance. Is it not true that charity begins at home, and that no one is providing for the physician and his family while he is carrying other's burdens?

Most of the physicians heartily endorse the idea of a fund, and we have already heard of several wives who are coming into the Auxiliary on the strength of aiding such a cause. The beginning is small, but many great enterprises have been established on a small beginning.

The Committee will be glad of any suggestions, and hopes to have a report from all County Presidents before the next annual meeting.

F. MAY BURNS, Chairman.
(Mrs. T. Mitchell Burns)

REPORT OF THE BENEVOLENT COMMITTEE

Following investigation and report of a Committee on a Physician's Benevolent Fund at the annual meeting of the Woman's Auxiliary at Estes Park in September, 1932, a motion was made and carried to appoint a new committee to draw up plans to be submitted to the Board of Trustees of the Colorado Medical Society for sanction.

The Committee submits the following plan, based on that of the Pennsylvania Society, which has proved efficient for twenty-seven years, and has been incorporated in their constitution and by-laws. Changes have been made to allow for the difference in the size of the membership and the fact that the Fund is being established by the Auxiliary.

It is proposed to set aside \$100.00 from the fund in the treasury at the present time and to request that each County Auxiliary of Colorado to add to this sum at least \$15.00. It is further proposed to add to this Fund each year by allotments of \$.35 (35 cents) from the annual dues of each member of the Society. The Committee, realizing the inadequacy of this Fund, recommends acceptance of voluntary donations and legacies, to be added to the principal. It is suggested that a period of five years be allowed to lapse before any distribution is made from this Fund to allow for growth, and that only loans be made till the Fund is of sufficient size to justify donations.

The Committee on Benevolence shall consist annually of the Auxiliary Secretary and three members of the Auxiliary, to be selected annually by the Board of Management, at least one of whom shall be a member of the Board, and a member of the Advisory Board of the State Medical Society of Colorado.

This Committee shall have absolute and confidential jurisdiction over the distribution of such part of the Medical Benevolence Fund as may be placed in its hands. No money shall be paid from its treasury except on warrant signed by the Chairman and Secretary of the Committee, and an annual audit of its books shall be made by a Committee of the Board of Management, the names of the beneficiaries being omitted. All beneficiaries shall be designated by number and after each annual audit, all communications tending to show the personality of the same shall be destroyed.

This Fund shall be kept separate from other moneys and may be invested by the Treasurer after the direction of the Board of Management, and shall be used only for the relief of pecuniary distress of sick or aged members of the Auxiliary, wives or widows of physicians.

F. MAY BURNS, Chairman.
(Mrs. T. Mitchell Burns)
MRS. LORENZ FRANK.
MRS. FRANK CARROLL.

At the October meeting of Denver County Auxiliary, Dr. John W. Amessee read an interesting paper on "Newer Trends in an Ancient Art." It gave a very clear exposition of the changing conditions under which the medical man must work and the problems he must meet.

Much interest was evidenced in the Benevolent Fund. A suggestion was made that every member of the Auxiliary put aside a penny a day for this fund, to be turned in at the next annual meeting. If this plan could be carried out through the state, the fund would grow rapidly without being a burden on the members. The suggestion was that this plan continue from year to year. Already some members in the Denver County Auxiliary have their "mite boxes."

A card party is being planned in November, the proceeds to go to our scholarship fund.

COLORADO NEWS NOTES

LA JUNTA—Dr. C. E. Morse was appointed City Physician for La Junta.

PUEBLO—Drs. H. T. Low, W. T. H. Baker, and Royal H. Finney have been appointed as the Committee on Medical Economics for the Pueblo County Medical Society, and they are undertaking a detailed investigation of the new plans under way for the medical care of transient indigents being sponsored by the Federal Emergency Relief Committee.

DENVER—Dr. J. W. Amessee of Denver was a guest speaker at the Annual Conference of the Kansas City Southwest Clinical Society on October 3 and of the Sedgwick County Medical Society, Wichita, Kansas, on October 6.

DENVER—Dr. M. C. Jobe of Denver has returned from a motor tour of the Central states and Canada.

TRINIDAD—Friends of Dr. J. R. Espey will regret to read of the death of Mrs. Espey early in September.

GRAND JUNCTION—Dr. Knude Hanson attended the Annual Meeting of the American College of Surgeons held in Chicago on October 9.

DENVER—The profession of Colorado will be pleased to know that Mrs. R. W. Arndt is recovering from a serious spinal injury incurred in a motor accident while touring in Ohio.

DENVER—Attending the Congress of Roentgenology held at Chicago September 25 to 30 were the following Denver physicians: Drs. K. D. A. Allen, L. G. Crosby, W. W. Wasson, and O. E. Coleman.

SALIDA—Dr. G. H. Curfman has returned from the Annual Meeting of the American College of Surgeons held in Chicago last month.

BOULDER—Dr. H. H. Heuston of Boulder attended the Annual Meeting of the American College of Surgeons.

DENVER—Dr. F. P. Gengenbach attended the Fall Meeting of the American Academy of Pediatrics in Chicago September 22 and 23.

FORT COLLINS—Dr. N. L. Beebe attended the Annual Meeting of the American College of Surgeons held in Chicago.

DENVER—Drs. C. F. Hegner, Frank E. Rogers, Philip W. Whiteley, L. W. Mason, and E. W. Perrott attended the Annual Meeting of the American College of Surgeons.

DENVER—Dr. G. K. Olmsted has been promoted to the rank of lieutenant colonel in the medical section of the United States Army.

Colorado State Medical Society Officers, 1933-1934

President: Gerald B. Webb, Colorado Springs.

President-elect: N. A. Madler, Greeley.

Vice Presidents: First, Frank E. Rogers, Denver; Second, A. G. Taylor, Grand Junction; Third, C. E. Sidwell, Longmont; Fourth, Ward C. Fenton, Rocky Ford.

Constitutional Secretary: John S. Bouslog, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone, KEystone 0870.

Delegates to American Medical Association: Senior, John W. Ames, Denver; Alternate, A. J. Markley, Denver; Junior, Crum Epler, Pueblo; Alternate, John B. Crouch, Colorado Springs.

<i>Councillors:</i>	<i>Term Expires</i>
District No. 1 F. W. Lockwood, Fort Morgan.....	1936
District No. 2 Ella A. Mead, Greeley.....	1936
District No. 3 George P. Lingenfelter, Denver.....	1936
District No. 4 C. T. Knuckey, Lamar.....	1935
District No. 5 George D. Andrews, Walsenburg.....	1935
District No. 6 C. Rex Fuller, Salida.....	1935
District No. 7 A. L. Burnett, Durango.....	1934
District No. 8 Lee Bast, Delta.....	1934
District No. 9 W. W. Crook, Glenwood Springs, Chairman	1934

Standing Committees, 1933-1934

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Scientific Work: Kenneth D. A. Allen, Denver, Chairman; Burgett Woodcock, Greeley; G. Burton Gilbert, Colorado Springs.

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Publication: C. S. Bluemel, Denver (1934); William H. Crisp, Denver (1935); C. F. Kemper, Denver (1936).

Medical Defense: T. D. Cunningham, Denver (1934), Chairman; Casper F. Hegner, Denver (1935); Frank B. Stephenson, Denver (1936).

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Special Committees, 1933-1934

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Constituent Societies Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Crysler, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, C. Rex Fuller, Salida.

Crowley County—Second Wednesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, W. W. Evans, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, G. M. Noonan, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—Third Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Friday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

WYOMING SECTION

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Vice President, J. L. Wicks, Evanston

President-elect, H. L. Harvey, Casper

Secretary, Earl Whedon, Sheridan

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EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

Protect Wyoming's Children

THE Wyoming State Board of Health is sponsoring a statewide campaign to protect the children of the State against diphtheria and small pox. In several counties the following plan is being used: The County Medical Society is in charge, and arrangements are being made to give toxoid injections to the children and to vaccinate them against small pox. No fees are being asked by the doctors for their services. A charge is made of fifty cents for the toxoid and twenty-five cents for the vaccine. These charges are a few cents above the actual cost of the material used, but the extra receipts, it is hoped, will pay for the toxoid and vaccine used on those children whose parents cannot pay for these materials.

The fine spirit shown by the medical profession in doing this work free is to be praised, but this service should not be expected to be given in the coming years. The doctors should be paid a fair price for their services, and there is no real reason why parents should not insist that the doctor be paid for protection given. There is no reason why diphtheria should take the life of a single child in Wyoming if the parents and the doctors will do their full duty. Every child should be protected against diphtheria and small pox when it reaches its first birthday. If this is done by every family in Wyoming, there will be no deaths among native born children thus protected.

That the use of toxoid and small pox vaccine should be 100 per cent is a question of education and cooperation on the part of

the medical men and the parents. It is the duty of the family physician to educate families, and it is far more important that the public school teachers tell children all about the dangers of diphtheria and small pox than it is to teach them to name the capital cities of all the states or some unimportant ancient history. The time to protect children against these diseases is in the first few years of life. No child should be permitted to attend school until he has been given this protection. There is no greater service members of the Wyoming State Medical Society can do at this time than protect the Wyoming children against these two terrible diseases.

E. W.



The Infected Tear Sac

Too little attention is given by the average physician to pus in the tear sac. There are at present hundreds of people in Wyoming with these pus sacs. Far more dangerous than a stick of dynamite is an eye where this infected condition exists. In such a condition it often takes only a slight scratch on the cornea to produce an ulcer that may lead to blindness. Many operations on the eyes result in failure by reason of these infections. All cases do not need an operation for their cure. It is true that some cannot be cleared up by drainage or antiseptics, but a great many can be so cured.

For years these chronic cases that were not cured otherwise were operated on by the oculists in an attempt to remove the tear sac completely. Often failure followed these attempts. Then Dr. Harold Gifford reported and demonstrated his method of destruc-

tion of the tear sac by opening and drying the sac, then cauterizing and destroying it by applying trichloroacetic acid. We have followed this method for fifteen years with the greatest satisfaction. Not once in that time has it been necessary to remove a tear sac surgically after treating according to the method given by the late Dr. Gifford. If the family physician will refer such cases to

the oculists, the results will be more eyes saved in Wyoming each year.

How to put a value on a useful eye is unknown. It cannot be measured in dollars and cents either to the owner or to the public. Every eye that has pus between the lids is more dangerous than a rattlesnake, and it is up to the family physician and the oculist to do away with the danger. E. W.

PARANASAL SINUS PATHOLOGY AND FOCAL INFECTIONS*

W. P. WHERRY, M.D.

OMAHA, NEBR.

To me has been assigned the subject of "Sinus Pathology and Its Relation to Diseases Elsewhere in the Body," surely a controversial subject, the elaboration of which in its entirety could be almost endless. It appears to be within my province, however, to discuss the regional situation itself—the paranasal sinuses—and review the research more recently collected, the conclusions, and show why statistics and opinions formerly offered do not seemingly have sufficient merit to be considered experimentally sound. Fairness, perhaps would guise this latter statement in somewhat more careful language and say that clinical research of necessity needs the same careful ground work as does laboratory research, and opinions offered without this check and control can hardly be credited as authentic conclusions.

Fully twenty years have elapsed since Billings and Rosenau first proposed the syndrome labeled "Focal Infections," yet a casual survey of any medical audience usually registers almost as many nays as enthusiastic yeas. Such a divergence of opinion among scientific men, at this late date, can have but one answer, expressed, in research language—"A faulty experimental set-up." A sound hypothetical experimental set-up then becomes the basis from which can come authentic conclusions. Pursuant to this dictum, since the subject under discussion starts from a pathogenic premise, of necessity the first step in the "modus operandi" is a clear-cut concept of the basic pathology involved.

During the past two or three years there

has developed in the minds of pathologists the realization that the paranasal sinus mucosa is susceptible to a distinct type of pathologic change, unique and different from that usually observed elsewhere. An appreciation of this physiologic, as well as pathologic, premise has created a new school which seemingly is divorcing sinus pathology from the accepted premise of general pathologic principles.

For instance, recently some very interesting work has been done upon the so-called allergic reactions. It has been determined that soon after the threshold of tolerance has been passed, the sinus mucosa will often react without reaction in the nasal mucosa or elsewhere in the host, creating a symptom syndrome distinctly different from that of our present accepted nasal syndrome. Certain investigators accept as probable a bacterial invasion associated with this allergic state; others, notably the St. Louis school, adhere to the premise that a bacterial association is unnecessary. All admit that repeated attacks definitely build toward true pathologic changes. Similarly, vitamin imbalances develop a reaction early in the sinus mucosa, different, however, from the allergic reaction in the delayed speed of onset and of resolution, and also in always having a bacterial invasion associated with it. The allergic state has a late pathological potential, while the metabolic change has an early pathologic potential. Coincident with and as a part of this pathologic potential comes the bacterial incidence, having as a corollary the factor of toxemia.

Rosenau and others, through animal ex-

*Read before the Wyoming State Medical Society at Rock Springs, July 18, 1932.

perimentation, have produced allied lesions. In some instances they have recovered the organism, not, however, in sufficient sequence to warrant positive acceptance. The German school and others, notably the Mosher group, hold that bacterial invasion is only of the surface epithelium and that bacteria are not found within the sinus mucous membrane itself. Kistner, Dunn and others have the contrary opinion. Again, certain investigators believe that a bacterial invasion characterizes the first stage, the allergic and metabolic factors being secondary implantations. These divergent theories constitute a variable of vital importance in the acceptance of sinus pathology and the focal infection syndrome. Obviously, then, before the first step in our apparatus set-up is usable, research must clearly define and establish the pathologic equation between the allergic, metabolic, bacteremic, and toxic factors.

The typing of paranasal sinus pathology, acceptable to the principles mentioned, is rapidly becoming a reality and is decidedly affecting what will later be discussed in surgical approach. In the larger pathologic sense, the simple typing of pathology is hardly sufficient to completeness. To eliminate variables, the entire area involved must be classified as to the degree of change and labeled as major and minor sites. Not only from the viewpoint of experimental accuracy but also from the standpoint of good surgical discretion, later to be used, it is desirable that the pathological status be determined from the angle of advanced changes. In this connection it has been more or less accepted that very little general absorption is incident to the more simple hydrops state, while greater potential absorptive possibilities are likely to follow the type associated with fibrous changes and thrombosed vessels in the submucous layers. Pathological differentiation, therefore, becomes the first gap to be covered in the experimental set-up contemplated. Obviously, to study the sinus changes and leave unnoticed adjacent pathology, having reference to the alveolar region, is to introduce a possible error. Should the surgical approach be followed in the same manner, the result would likewise be

prejudiced to the unfair evaluation of the experiment.

Although accurate percentages are not available, in certain large clinics sufficient cases have been cited to warrant the acceptance of the fact that in 23 per cent of all sinus infections the alveolar process is likely to be affected. A percentage as high as this places a definite liability upon a paranasal sinus diagnostic routine, and in addition its potential possibility creates a definite place for alveolar studies in the experimental set-up being constructed.

Greater than knowledge of pathology and its intimate relations comes diagnostic vision—not the abstract fact of seeing, but the broader concept of being able to look behind, through, and beyond the problems presented. Diagnostic vision plus pathologic knowledge predicates the second step in the set-up and is the only basis from which can come facts worthy of being collected and appropriately interpreted. Diagnostic vision entails the collection of facts leading up to a definite program. Perhaps the first essential is a most careful clinical history and an exact analysis of the physical state in its entirety. Lastly, a most careful follow-up is required over a sufficient period of time, including within its role the maintenance of an allergic and metabolic balance. Between the history and the follow-up should come an accurate elimination of the suspected focal site or sites.

Mosher, Fenton, Lynch and others working in this field of research, have definitely shown that a physiologically healthy mucosa will only be regenerated if all the pathogenic membrane in the area has been removed. One needs only a limited knowledge of the sinus labyrinth to realize the impossibility of approaching, acceptable to this dictum, all the cells through the nasal route. Sufficient clinical data has now been assembled to warrant the statement that an intranasal approach in a true focal study, with frank pathology present, is inaccurate surgery as contrasted to the complete elimination possible through the external route.

Opinions, therefore, based upon statistics gathered from experience with inaccurate surgery, can hardly be accepted in this ex-

perimental study. This statement may seem radical; it probably is, yet in clinical research every variable discounts the authenticity of the result. From an everyday practice standpoint, diagnostic discretion, of course, will determine that procedure best fitted to accomplish the result desired. The fact remains that sinus surgery has been made over into a truly scientific surgical procedure through the Caldwell-Luc method upon the maxillary sinus and the Lynch-Sewell method for the upper sinuses. Intranasal surgery certainly has a place in our surgical routine.

The surgical correction of a focal site is determined with the single objective of inducing the regeneration of a suitable functioning mucosa in the operated field. Mosher and his group have been able to show ciliated epithelium in about twenty-one out of twenty-seven reoperated maxillary sinuses and has shown glandular developments in or about the eighth month postoperative. The speed of this regeneration and the almost negative postoperative observation following radical exenteration is in such contrast to the long drawn out period following the intranasal approach that even a little experience quickly impresses an observing operator of the relative merits of the two methods.

Applying, in an explanatory way, the long known principles of wound repair to paranasal sinus surgery, it has been determined that if all pathologic tissue is carefully removed with the least disturbance of normal circulation, the entire area is quickly covered with a sero-sanguinous exudate, rich in histocytes. Recent studies confirm the opinion that histocytes are mesodermal cells and therefore productive of scar tissue. Although necessary to the reticulo-endothelial defense mechanism, they are, nevertheless, later inhibited in this fibrous transformation by the oncoming epithelial growth from the adjacent normal epithelium. This obtains when this epithelial new-growth is unhindered by latent pathogenic cells or by trauma. In other words, postoperative trauma slows up epithelial growth and invites mesodermal growth in the nature of proud flesh and scar tissue. To reiterate, in a frank

case of paranasal sinus pathology of potential remote possibilities, intranasal surgery cannot properly allow a good surgical clean up such as is possible in the radical procedures. Therefore, in the conduct of a true clinical research evaluation, it has no place in our experimental set-up.

Heretofore, most opinions upon sinus pathology and focal infections have been predicated upon indiscriminate cases, insufficiently worked up and inaccurately handled. A suitable case is not one who has already had nervous disorders, multiple foci, cardiovascular degeneration, or those who are constitutionally inferior. Incidentally, this latter group are too often included in statistical studies. Unfortunately they will probably always be with us, will continue to have innumerable operative procedures with temporary relief, and always have physical and mental problems. This group should have no place in scientific data; its inclusion discredits our findings.

In summarizing, it would seem that although the focal infection concept has been in vogue for over twenty years, we are just now determining its applicability to paranasal sinus pathology. On the positive side are sufficient clinical results to warrant the possibility of acceptance. On the negative side are gaps in the chain of evidence as yet unanswered. The answer can only come after good clinical research, perhaps as follows:

1. Careful clinical history and clinical set-up; an accurate knowledge of sinus pathology; a determination of the relative quotient between the allergic, metabolic, bacterial, and toxemic factors; last, but not least, "diagnostic vision."
2. Complete elimination of the focal site and a thorough understanding of tissue regeneration.
3. A careful follow-up.

Phenobarbital, when called Luminal, costs 340 per cent more.

Take this Journal home to your wife.

WYOMING NEWS NOTES

Dr. C. E. Stevenson had a birthday September 9 and Mrs. Stevenson invited the members of the Sheridan County Medical Society to help celebrate the occasion. All the doctors in Sheridan were present and enjoyed a bountiful dinner.

It was a surprise to one of the deans of the medical profession, and the fine fellowship shown by the men was a tribute to the doctor and his wife and daughter.

Dr. and Mrs. R. E. Crane entertained the medical profession on September 12 at their lovely summer home at the foot of the Big Horn Mountains at Story. After a hot day's work the members of the Sheridan County Medical Society enjoyed the cool mountain breezes, the appetizing and splendid dinner with the Cranes. No telephone calls interfered and a wonderful evening followed.

The Society voted to give their services free to protect the children of Sheridan against diphtheria and small pox.

It is no wonder that the Doctor and his family like to speed away to their mountain home after a hot day in town. Here they have a refuge where rest and good health are the rewards. Refreshed after a fine night's sleep a doctor ought to be better able to meet the demands on his strength. Dr. and Mrs. Crane are to be congratulated on their foresight in making this haven of rest at the foot of the Big Horn and being willing to share it with others.

Physicians Move to Prevent Congenital Syphilis

Since it is known that the transmission of syphilis to the child can be prevented if the infected mother receives treatment during pregnancy and can be cured in the child if treated before organic changes take place, the committee appointed by the American Medical Association urges that blood tests be taken of all pregnant women and treatment provided when necessary.

All the readers of this Journal recognize what President Cleveland once said—that we are confronted by a condition and not a theory—yet we believe that cutting appropriations for health work is the poorest sort of economy. Health is wealth, and no nation has ever been great and maintained its greatness on a feeble population. Doubtless some economies can be made without injury to the protection afforded by the Public

Health Service and the National Institute of Health, but we must still hope for expansion, rather than contraction, and entirely apart from how it may affect individuals, all anxiously look forward to the day when liberal funds will again be supplied and full activities be resumed. All of our members and readers should urge this point of view, and do all they can to keep appropriations for public health purposes at the highest possible level.—Editorial, American Journal of Public Health, Sept., 1933.

Many believe that the future control of contagious disease lies largely in prophylactic vaccination, and all over the world efforts are being made to discover vaccines. Concerning these, when they are discovered, as well as for those for which vaccines are already known, there must be given to the public information accompanied by advice which may be so urgent as to partake somewhat of the character of compulsion. How should such a campaign be carried out? The highest success has been attained by enlisting the aid and cooperation of the family physician—in other words, the clinician. It is a matter of wisdom for the health officer to keep in close touch with those who reach the largest proportion of the population, to consult with them, and to accept their advice. Any antagonism which may be aroused seriously injures the cause which the health officer has at heart, and may result in a large degree of failure, not only for the particular scheme, but for others of like character elsewhere.—Editorial, American Journal of P. H., May, 1933.

In the official report of vital statistics, the greatest number of deaths of infants under one year of age occurred in New York (10,446), Pennsylvania (10,107), and Ohio (5,961). The highest infant mortality rate was for New Mexico (113.6), which was the only state with a rate higher than 100.0 per 1,000 live births. Other states with high infant mortality rates were Arizona (94.5), Colorado (73.2), District of Columbia (72.9), South Carolina (76.6), and West Virginia (75.3).

Colorado Medicine

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EDITORIAL NOTES AND COMMENT

A Constructive Plan for Post-Depression Readjustment.

RECONSTRUCTION following the late economic upheaval concerns the medical profession in an important way. There are necessary readjustments, especially pertaining to the millions of pauperized people who have received free medical care and who will with reluctance pay for future service. What must be the nature of our reaction consistent with professional dignity and traditions; must our attitude be offensive or defensive? Funds for medical care will always be secondary to the basic necessities—food, shelter, fuel, and clothing. In fact, funds for sickness bow before the popular luxuries.

The proposition has been critically and constructively studied in Michigan by a Committee for the State Medical Society. This survey was discussed by F. C. Warnshuis, of Grand Rapids, at the recent Secretaries and Editors' conference in Chicago. The suggestions thus made for that state are largely applicable in our own.

There are four and one-half million potential recipients of medical care in Michigan. The average income is \$2,600 per family; 35 per cent of the income is received by 8 per cent of the population. As elsewhere, medical care must compete with education, transportation, et cetera, above the basic requisites. That state has 4,775 physicians, not distributed according to the optimum facilities for adequate service. Means for preventive medicine are meager. Overhead expenses of physicians average about 40 per cent of gross income; 33 per cent have net income of \$2,500 or less.

Michigan's State Medical Society has, through its Committee, outlined avenues of work for solving the problems. It hopes thus to record a defensive attitude and formulate offensive activities. Briefly, the outline of the work is as follows:

1. The State and County medical societies must insist that their members are up to date in scientific knowledge and practice. They are to devise and make available post-graduate opportunities for study. Doctors who lag will become branded by their colleagues and ultimately by the public.

2. A corps of speakers is made available through the Committee, their object being education of the public in preventive medicine and health conservation. Suitable topics are available for presentation over the radio or before high schools, parent-teachers and civic organizations, and other lay groups.

3. The Society realizes that civic responsibilities for care of the indigent are not rightfully borne entirely by the medical profession. Contracts are therefore being made with the institutions whereby physicians will be granted a modest remuneration for such services.

4. The State Medical Society, as a central unit, makes a business of assuring co-operation of its members with officials of the public health organizations.

5. No plan of health insurance is so far recognized or approved. The Society is cognizant of its dangers. No plan yet devised allows free choice of physician, professional control, and is non-profit.

6. Hospital administrations are being re-

adjusted so as to avoid abuses of charity and special rates.

By means of the above sensible program, a redistribution of the costs of medical care is being sought. Likewise a better understanding between public and profession is anticipated. The latter will probably occur automatically with establishment of the former. The medical profession holds in the palm of its hand the greatest opportunity in the history of the world for service to civilization. If this is to continue, the field must remain attractive to the best minds of every generation. The leadership will remain at the top—the American Medical Association—and the policies take inception from our rank and file, the State and County societies. More states should devise such a plan as that of Michigan, a worthy leader.



A Possible Etiologic Factor in the Common Cold.

TRY to find someone who is not interested in the common cold! Indifferent as one might be, he is forced to take a very personal interest in it from one to four or more times a year—if he's a normal individual. Granting this fact, acute coryza has made a nice subject for lay consumption through popular magazines. The articles are colorful indeed; even a physician may enjoy reviewing what is known and what we would like to find out about the malady. What man does to the common cold comprises a list of practically negative results; what the cold does to man is a story startling and sad. The United States Health Service estimates conservatively that it inflicts upon this country a direct economic loss of 450 million dollars annually. There is no way of accounting the catarrhal afflictions for which it paves the way. Its cause is either unknown or only partially known. Dochez, of Columbia, claims it may be the keystone of the many ills the etiologic agents of which enter the body through the upper respiratory tract.

Therapeutically, we must admit that two procedures head the list—rest, and the use of "two dozen soft linen handkerchiefs." Four major lines of attack have enjoyed

vogue, each having slight substantiation but doomed in turn to disappointment. Vaccination, ultra-violet irradiation, chlorine inhalations, and dietary alterations have received adequate trial. The latter has aimed at a better supply of vitamins and the optimum acid-base equilibrium. Mother Nature probably craves no such help. At any rate, disappointment it is—we don't know what causes the common cold.

An original paper by A. E. Ewens, M. D., of Atlantic City, sets forth a plausible theory regarding an etiologic factor. He refers to the allegedly innocuous uvula. This author has noted the benefits of clipping that structure for certain habitual coughs and clearing of the throat. At first conservative, he later improved results by its complete removal—staphylectomy. In many hundreds of cases, Dr. Ewens has observed a remedial influence upon catarrhal conditions of the entire upper respiratory tract. This was an incidental and unexpected observation; the original reports are accredited to the patients themselves. Their relative freedom from colds was at first considered imaginary. The earliest observations in the series of cases were made twenty years ago. The author considers that the work then inaugurated has been followed by incontestable proof of the provocative importance of the uvula in intractable colds and other catarrhal entities. He ventures that cold susceptibility is reduced in excess of fifty per cent and catarrhal conditions and even sinusitis are materially reduced.

The rationale of this hypothesis is well founded in fact. The uvula possesses comparatively poor vascularity; it is exposed to repeated mechanical insult and bacteriologic invasion. Pruritic sensations and engorgement of this organ are known to precede and accompany coryza. Biologically speaking, the organ may have protected primitive man against foreign bodies and flying insects, finally becoming rudimentary and now superfluous. Cessation of function may have led to impairment of its vitality and made it a pathogenic organ.

These observations are apparently worthy of further substantiation in selected cases. The procedure is simple; topical application

of a suitable local anesthetic renders it painless; hemorrhage is negligible. The above author records no undesirable effects, nor do we know of any. If such there are, as even a slight alteration of the voice, the observations will be made known as further work is done.



Amebic Dysentery.

AN unusual number of cases of amebic dysentery were found, about the middle of August, to have had their inception in a Chicago hotel. Of the food handlers in that hostelry, 25 per cent were found infested with *Entamoeba histolytica*. The management and the Chicago Health Department spared no expense in clearing up this focus and tracing cases throughout the country. All State Medical Society headquarters recently received a pertinent telegram from Dr. H. N. Bundeson, President of the Chicago Board of Health. It fully explained the situation and requested that secretaries of all County Societies inform their members of the nationwide N. B. C. broadcast on November 14, which gave the history of this outbreak. Questionnaires were sent to 22,000 guests of the hotel who had registered between May and November. Though we have seen no figure on the number of cases, it is known to have appeared in at least fifty cities. Many cases were diagnosed as ulcerative colitis, peritonitis, appendicitis, et cetera. Stringent measures are now in effect to detect and eliminate every infested food handler in Chicago hotels. Since this type of help is a transient sort, some cases are undoubtedly floating about. Another complicating factor is the variable incubation period—nine to ninety-four days.

The ameba invades the intestinal submucosa and destroys tissue. Cytolytic and hemolytic substances have been demonstrated in cultures of *Entamoeba histolytica*. The majority of human cases are derived from food or water containing the cysts. The contamination arises from sewage fertilized vegetables, from flies and contaminated water, and chiefly from human carriers handling food. Acute cases begin suddenly with

marked abdominal pain, tenesmus, and diarrhea. There is usually no fever, or it may be slight. As the diarrhea becomes more marked, blood and bits of mucous membrane are passed. Weakness rapidly follows. This attack usually lasts three or four days, to be followed at intervals by milder attacks. If it continues, emaciation, jaundice, chronic anorexia and indigestion with colic and diarrhea may go on indefinitely.

Medical men should be alert for this possibility in all forms of diarrhea, particularly at this time. Though originally considered a tropical disease, there are sporadic cases in nearly all sections. Diagnosis depends upon microscopic detection of the organism in the stools. When it is impossible otherwise to procure suitable specimens, the rectal tube or proctoscope is essential. Several tests may be necessary. The more solid portions are selected and normal saline solution added so as to form a thin smear.

Emetine hydrochloride and emetine bismuth iodide, given orally or subcutaneously, are considered specific. Chiniofon orally and by bowel is useful. Other drugs as acetarsone, vioform, and carbasone have given excellent results. For details of therapy, the reader is referred to a review in the J. A. M. A. of November 18, 1933. The cure can be determined only by the permanent absence of amebas from the feces. Examinations should be repeated during at least four months following cessation of treatment.

That amebiasis may not become a more important menace, stringent control of food handlers must persist. The Chicago Board of Health, the hotels, and the radio are to be complimented upon the unstinted efforts in behalf of public health. Cooperation of the medical profession is essential to carrying on their good work.



Sickness Savings Funds—A Suggestion

BY the first week in December, approximately \$500,000,000 in Christmas Club Savings will have been distributed in this country through the banks. These funds will go into circulation for gifts, festivities, and necessary obligations.

Not a few doctors will wonder whether

some small portion of these funds might be used to cancel some of the red figures on their books. Needless to say, that would be expecting too much. Gratitude is commonly a passing fancy—"God and the Doctor are soon forgot." Most of the money will be used for Christmas, for it was saved with that in mind.

This plan, rightfully popularized by the banks, is applicable to other requirements. For example, a number of cities have such plans available for the budgeting of tax money. Why not one for sickness? One way to start it would be a suggestion from the medical profession to local bank officials.



Special Attention to December's Colorado Medicine.

THIS issue of Colorado Medicine is one of the most important. Herein are the transactions of the last annual meeting, committee reports, and financial statements of your Society. There has never been a year or an issue of this Journal containing more of vital importance to the individual physician or medical organization.

Read those pages in this number! They intimately concern your present, your future, and your pocketbook.



Substantial Gift to the School of Medicine

A STRIKING tribute of esteem for his old associates and of devotion to the institution where he rendered signal service for a generation is reflected in the presentation to the Board of Regents of the University of Colorado, on November 14, of a tract approximately three and three-fourths acres in extent, by Dr. H. G. Wetherill. This valuable property adjoins the campus of the University Medical School and the Colorado General Hospital; it will be devoted to the health interests of the students and members of the faculty as an athletic field, named for the donor, and will round out present equipment and appointments in gratifying measure.

Dr. Wetherill, although retired and a resident of California, has never severed his happy connections with the profession of

Colorado. Through frequent visits to the scene of his former labors it has been easy for him to retain the warm friendship of colleagues throughout the state, all of whom will rejoice in this additional expression of his considerate kindness. As President of the Denver County Medical Society, the Colorado State Medical Society and the Western Surgical Society, and as Professor of Gynecology of the local School of Medicine for nearly thirty years, he aided in no small degree toward bringing the profession of the Rocky Mountain area to its present enviable position.

Colorado Medicine joins Dr. Wetherill's host of friends in this state in extending with grateful remembrance its warmest expression of gratitude and its earnest hope that good health will attend him and Mrs. Wetherill for many years to come.

J. W. A.



Vaccinate Out Smallpox

A RELATIVELY small epidemic of smallpox exists in and around Denver, and extends to the east and north. A majority of the cases have been severe, with some of the fatal hemorrhagic type. Recollections of the epidemic of 1921-22 with its high mortality should urge the medical profession to stamp out the present situation before it grows.

There is only one way to control smallpox: VACCINATION. A potent cowpox virus and proper technic will produce in every individual a primary "take," vaccinoïd, or immune reaction; these assure protection.

The present situation has demonstrated that a large number of our citizens have never been vaccinated, have never had a "take," or were vaccinated many years ago. These individuals are potential victims of smallpox, and while Denver and its vicinity has the majority of the cases, smallpox respects no geographic barriers.

Large numbers of our population have been vaccinated in the past few weeks, but our citizens are not safe, and an epidemic is possible, until all are vaccinated.

E. R. M.

SURGICAL INDICATIONS IN HEAD INJURIES*

J. JAY KEEGAN, M.D.

OMAHA, NEBR.

The subject of head injuries has been presented so thoroughly in recent years by numerous authorities, more or less in agreement as to proper therapy, that I can only repeat the fundamental neurological principles involved and emphasize some of the unusual complications by brief case examples.

The often repeated statement that the seriousness of a head injury is more dependent upon the brain injury than the skull fracture needs no emphasis. Accordingly, the first requisite for intelligent care of head injuries is a fair knowledge of the common neurological signs of general or focal brain disturbance. Briefly these are the disturbance of consciousness, vasomotor shock, increased intracranial pressure, focal paralytic or reflex changes, and signs of impending death from medullary paralysis. These may seem complicated to the average man, but are familiar to most physicians and need only a little more attention.

The primary disturbance of consciousness and the length of time it lasts is a fair index of the severity of the brain concussion or contusion. Transient unconsciousness is a good sign, regardless of the apparent severity of the head injury. Most of such cases will recover rapidly and can be permitted to return to work as soon as superficial wounds have healed and ecchymoses disappeared. Conversely, the longer the period of unconsciousness the more guarded must be the prognosis for ultimate or complete recovery. Unconsciousness which lasts longer than an hour or two indicates rather severe brain contusion and disorganization, probably associated with brain ecchymoses and edema, as a bad bruise would appear elsewhere on the body. Unconsciousness which lasts several days usually indicates some central disturbance,

probably diffuse punctate hemorrhages throughout the white substance of the brain, so-called hemorrhagic encephalitis. The mortality of these cases is high, regardless of treatment, or their recovery is very slow and liable to be complicated by distressing mental or physical disability. Late cerebral atrophy may be demonstrated by the encephalogram, and headaches and dizziness disable them from work.

Vasomotor shock is very common during the initial stages of head injuries and constitutes an emergency of the first order when seen. It consists of a sudden loss of vasomotor tone, with very low blood pressure, pallor, sweating, and dilated pupils. Such a patient may die within a few minutes if supportive treatment is not given immediately. The head should be lowered to favor cerebral circulation; circulatory stimulants should be given intravenously instead of subcutaneously, and the lost balance of blood volume restored by intravenous 10 per cent glucose injections, with adrenalin added to the solution. Quiet should be obtained by a harmless sedative—not morphine, as it depresses the respiratory center too much. Codeine is safer. The patient should not be disturbed by wound repair or x-rays until he has recovered from the shock. Undoubtedly many head injury cases die unnecessarily as a direct result of this shock because intravenous stimulants are not given soon enough or at all.

A very recent case might be cited: A man of 56 years, who was brought into a hospital promptly from an automobile accident. He was conscious on admission but had been sitting upright on the way in and was further transported in a wheel chair about the hospital. He should have been prone with the head low. He felt himself slipping out and commented about it, but there was delay in recognizing that his blood pressure was almost nothing and that his pupils were dilated and that he was about to die from shock. Stimulants were

*Read before the Sixty-third Annual Session of the Colorado State Medical Society at Colorado Springs, September 15, 1933. Dr. Keegan was guest of the Colorado Neurological Society.

not at hand or were not given properly, waiting for a doctor to arrive. When the doctor did arrive, the patient died while preparation was being made for intravenous injection. This man died of simple shock, not serious cerebral injury, for he was conscious. He did not die from intracranial hemorrhage, for he had no slow or bounding pulse and did not pass from restlessness to coma. Every hospital should be so organized that such patients would receive prompt and proper treatment as soon as admitted.

Intracranial pressure signs may appear rapidly in head injuries if there is massive bleeding at the base of the brain from torn large venous sinuses or arteries. Not much can be done for such a case, except to recognize what is occurring and to predict a fatal outcome within a few hours. Intense restlessness precedes pressure coma; it is here that morphine is absolutely contraindicated. When a patient is fighting to retain his consciousness and keep breathing is no time to give morphine, for he promptly goes into coma and soon stops breathing from respiratory center depression. Undoubtedly many serious head injury cases have died directly as a result of almost routine morphine administration in some hospitals. It is no justification to say they probably would have died anyway, and no credit to the medical profession not to recognize the danger or effect of morphine in depressed states of the central nervous system. I recall a very restless case of meningitis to whom an intern gave a quarter of a grain of morphine and learned his lesson by having to maintain artificial respiration on the patient for two hours. And every brain surgeon has become so fearful of morphine through similar experiences that he is forced almost to prohibit its use in the hospital.

Other signs of rapidly rising intracranial pressure are the bounding slow pulse, high pulse pressure, slow respirations, headache, and vomiting. Nurses and interns should be instructed to watch for these signs frequently, every hour if under suspicion, to detect a serious situation before medullary collapse begins, when anyone can recognize

the patient is dying. A pulse in the sixties is under suspicion, in the fifties fairly definite, and in the forties usually too late to relieve intracranial pressure successfully by an operation. A pulse pressure which exceeds the diastolic figure corresponds to the pulse rate in the forties, rather late for surgical relief. Respirations under fifteen per minute are significant, unless morphine has been given.

The focal signs of brain injury are most important for they represent the group of cases in which there is the greatest prospect of benefit by surgery. The first observation to be made on admission is whether there is similar movement in both arms and legs. If there is paralysis at this early stage it usually means motor cortex laceration and must be distinguished from paralysis which appears later from increasing focal hemorrhage.

An example of this observation is the case of a two-year-old child who fell downstairs and was momentarily unconscious. A left sided partial paralysis was noted immediately but had nearly disappeared in a few hours. X-rays showed a separate fracture across the right parietal bone. Although the child was recovering safely, it was decided better policy to determine the condition of the dura and cortex at the fracture line. A small incision revealed a torn dura and badly lacerated cortex herniating through the fracture. Repair of the tear in the dura after removal of devitalized cortex is believed to leave this child with less cortical scar and less prospect of late focal epilepsy. The early observation of transient paralysis and rather wide separation of the fracture edges led to the diagnosis and exploration.

Focal paralysis which develops some hours after the injury usually means a local increasing hematoma, which should be explored promptly. It usually comes from a fracture line which crosses the middle meningeal artery in the temple. Here x-rays are valuable to have as a warning of this possibility. Such a case should be watched very carefully during the first twenty-four hours, within which time focal signs usually appear. Since the hematoma increases up-

wards from the temple it affects first the face, next the arm, and last the leg centers. It should not be necessary for a complete hemiplegia to develop before the paralysis is discovered. The first sign is loss of the corneal wink reflex on the opposite side, due to loss of sensation, next a little lagging of the opposite face in emotional expression, then some weakness in the hand grip and less spontaneous movement of this arm. The abdominal and cremaster reflexes of that side then disappear and the leg becomes weak with elevation of the great toe, instead of normal flexion on plantar stimulation. In addition, as these symptoms of paralysis on the opposite side progress, the pupil dilates on the same side as the hematoma. What more definite could one want for diagnosis, when associated with signs of increasing intracranial pressure, than headache, restlessness, vomiting, slow pulse, and high pulse pressure? Unfortunately middle meningeal hemorrhage occurs so infrequently that one may be caught off guard, and the symptoms develop during the night without recognition. Nurses in attendance always should be carefully instructed.

Most focal signs in head injuries concern the motor cortex, although sensory loss may predominate from parietal lobe lesions and speech disturbance from left temporal lobe damage. At the base of the brain the long delicate sixth cranial nerve to the external rectus oculi muscle is easily disturbed by basilar hemorrhage and the eye does not turn out normally. Other cranial nerves may be damaged, particularly the auditory by a fracture across the petrous bone. This is best treated by careful cleanliness in the external auditory canal, but no irrigations which might force infection in. Phenol in glycerin drops are perhaps best.

A fracture across the frontal region may involve the cribiform plate and lead to a cerebrospinal fluid fistula into the nose. This should be detected early by placing the patient on his side, when blood stained fluid escapes steadily by slow drops. Active efforts should be made to stop this flow by reduction of the fluid pressure, dehydration with hypertonic glucose, head elevation,

quiet, and perhaps spinal drainage, in the hope that clot or exudate may seal over the opening. If the flow continues beyond a few days in spite of these efforts, then something more should be done. The tear in the dura should be closed through a frontal trephine by insertion of an iodoform pack between the dura and bone or by placement of a small piece of fascia lata over the opening. This may seem radical when the patient is quite comfortable and apparently recovering, but one case of delayed meningitis is convincing evidence that a prophylactic operation is justified. A case of this kind recently came to attention where the patient, a promising business man, had left the hospital and was thought to be recovering nicely at home. He suddenly developed a convulsion, high fever, and signs of fulminating meningitis and died within forty-eight hours. He had had some intermittent fluid escape in his nose that had not been thought serious.

The final stage of most fatal head injuries is what is called medullary collapse, in which coma occurs and the stable regulation of the cardiac, respiratory, and temperature centers is lost. This syndrome of loss of consciousness and rapidly rising pulse, respiration, and temperature is a common manner of death from many causes. It is just as certainly a sign of beginning death in head injuries. No surgery is permissible at this stage, unless the balance can be restored by medical relief, as intravenous hypertonic glucose or spinal drainage to relieve intracranial pressure.

The application of spinal punctures and hypertonic glucose in the treatment of head injuries not long ago seemed fairly well established, but recently both have been seriously questioned by good authorities. I still believe that both are valuable in selected cases, but that routinely they may be dangerous or ineffective. Spinal puncture will confirm a rapidly increasing basal hemorrhage and may give very temporary relief as well as hasten the inevitable death of the patient. A little later when active bleeding has had time to stop and neck stiffness, restlessness, headache, and eye pain persist,

a spinal drainage of blood tinged fluid often gives prompt relief when the patient seemed to be getting worse. Repeated daily spinal taps in such cases may be beneficial until the fluid has become clear and the pressure normal. Spinal drainage will not relieve brain edema and may be dangerous by favoring herniation of the cerebellum into the foramen magnum. Brain edema symptoms usually appear in greatest degree on the second to fifth day after the injury, suspected by headache, drowsiness, and slow pulse without increased pulse pressure. I see no harm in the therapeutic test of 100 to 150 c.c. of properly buffered 50 per cent glucose intravenously in these cases. Many are definitely improved by each injection. I recall one striking example of this. A man entered the hospital, on the third day after a moderate head injury, complaining of increasing severe headache, mental sluggishness, and drowsiness. A spinal puncture did not relieve him, but he experienced relief during the injection of the glucose.

Most controversies are carried on by enthusiasts and nihilists, the one overdoing a good thing and the other doing nothing either by choice or ignorance. The treatment of head injuries calls for good observation and balanced judgment. There are

many factors to be considered, and although perhaps more patients will recover by too little than by too much interference, the best treatment requires individual study of each case and well selected assistance.

Thus far I have said little about necessary treatment of external wounds of head injuries, and I shall close with a few practical suggestions about these. If the scalp is lacerated and badly contaminated, it must be thoroughly cleaned of dirt, hair and pieces of hat, the ragged edges trimmed smooth, and the wound closed for easy primary union. An infected scalp wound comes only from a dirty ragged wound and is inexcusable, besides being a serious obstacle against any later necessary intracranial surgery. The scalp should not be closed over a depressed fracture, for dirt is invariably driven in with the bone fragments. The irregularity of depressed bone usually can be seen or felt in a cleaned wound and, if this cannot be elevated immediately on account of shock or lack of facilities, the wound should be packed and the work done properly the next day. Depressed fractures without scalp laceration can safely wait three to five days before elevation, when the brain edema is subsiding and repair of the dura easier.

IMPROVED SURGICAL PROGNOSIS IN SIMPLE GLAUCOMA*

WILLIAM H. CRISP, M.D.
DENVER

Most physicians probably think of glaucoma as an inflammatory disease, and fail to realize that there is a common form of this disease in which the patient may become blind without experiencing inflammatory symptoms. This impression is quite generally favored by the textbooks on the eye written for general physicians, for in these textbooks emphasis is laid upon differential diagnosis between iritis and glaucoma, both regarded as inflammatory conditions, while little or nothing is commonly said about the more insidious non-inflammatory type of glaucoma.

Graefe, often called the father of modern ophthalmology, first advocated and popularized the use of iridectomy for glaucoma not long after the middle of the nineteenth century. He spoke of the failure of iridectomy "in amaurosis with cupping of the optic nerve." It is probable that for a long time after Graefe's day many cases of simple glaucoma were mistaken for optic atrophy.

It is only about twenty-five years since Schiötz of Christiania invented the tonometer, an instrument for exact measurement of the relative tension of an eyeball. Before that time, and by many workers even since that time, the only method employed for measuring ocular tension was by estimation

*Read before the Sixty-third Annual Session of the Colorado State Medical Society at Colorado Springs, September 15, 1933.

of the amount of resistance encountered when the two index fingers were placed upon the upper part of the eyeball in somewhat the same manner as when determining the presence of fluctuation in an abscess (Fig. 1).



Fig. 1. Taking tension with fingers.

The invention of the tonometer was a great advance in the early diagnosis of glaucoma, especially of so-called simple glaucoma, for many of the cases of this type have already lost an important amount of vision while intraocular tension is still so

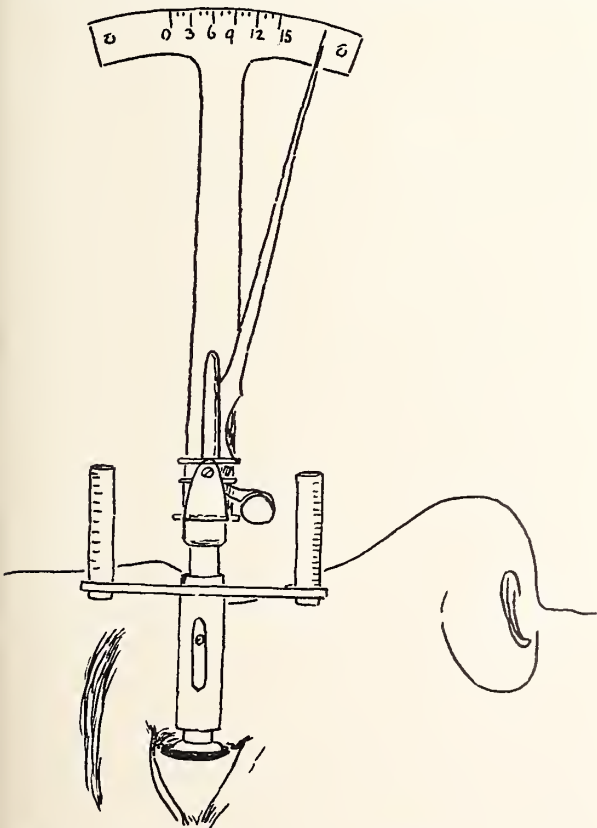


Fig. 2. Showing position in which tonometer rests upon eyeball.

slightly elevated as to render diagnosis by palpation provokingly unreliable.

Schiötz's own model of the tonometer was soon followed by an excellent modification by the Gradles of Chicago, a drawing of which is here presented (Fig. 2). A curved basal plate rests upon the cornea, and through the center of the instrument passes a vertical rod carrying one or more supplemental weights. If the eyeball is relatively hard, the central rod is less able to dent or impress the cornea, and the varying extent to which the cornea is so dented by this rod is indicated by the behavior of the needle which is connected with the movable part of the apparatus. Other models have succeeded those of Schiötz and Gradle, but the general principle involved is the same. The findings are now recorded in millimeters of mercury. It is not now believed that these records represent necessarily the exact intraocular tension, but they do furnish ex-

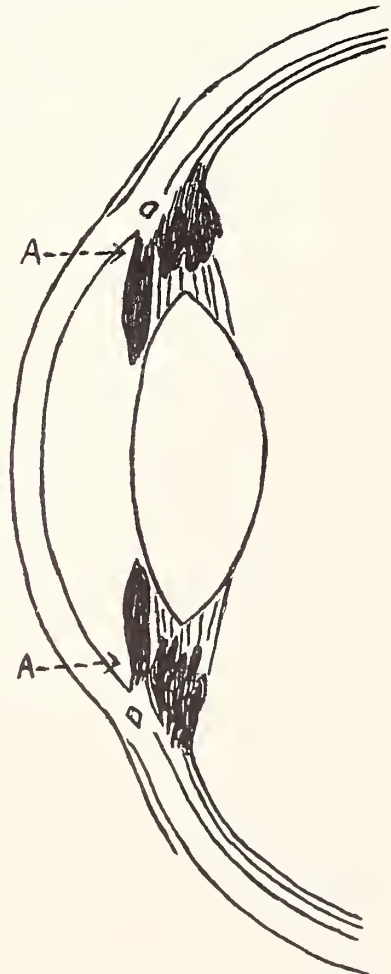


Fig. 3. Anterior segment of eye in cross section. "A" points to angle of anterior chamber, where all or most of drainage of intraocular fluid probably occurs under normal conditions.

tremely useful comparative measurements as between different eyes and at different times in the same eye.

While the etiology of all types of primary glaucoma is still a mystery, the disease is most satisfactorily thought of as a disturbance of relationship between the formation of fluid within the eye and the excretion of fluid from the eye. The principal mechanism for maintenance of this balance is pretty certainly situated around the angle of the anterior chamber (Fig. 3). Fluid is more or less constantly secreted from the ciliary blood vessels, and failure of the drainage apparatus at the angle of the anterior chamber to maintain a satisfactory balance with such secretion is very intimately related with increased tension and with tragic symptoms resulting therefrom.

The operation devised by Graefe, and which has usually proved very effective in the relief of the more acute and inflammatory types of glaucoma, consists of the excision of a broad sector of iris, as well back to the root of the iris as possible. Usually a lance knife is carried into the anterior chamber from just behind the corneal margin, the iris drawn out with forceps, and cut off with scissors (Fig. 4).

In a few cases of the simple or chronic type of glaucoma, so-called, iridectomy gave partial or sometimes even complete cure so far as further development of the disease was concerned. But in the very great majority of cases of this type, iridectomy was very disappointing, and for very

many years this insidious and non-inflammatory type of glaucoma was regarded as one of the most hopeless diseases in the domain of ophthalmology. Fortunately, the surgical prognosis in this disease has been enormously improved during the past quarter of a century, and I think it may now be said that most cases of this type, if given proper surgical treatment at an early stage, are likely to retain useful vision to the end of life.

The operations which have largely replaced iridectomy in treating the chronic form of glaucoma all seem to have one common purpose, as viewed in the light of present-day understanding. That purpose is to establish new channels of drainage from the anterior chamber (the interior of the eye) to the subconjunctival space (the exterior of the eye).

The first important operation devised for this purpose was that of Lagrange, a Frenchman, who turned back a conjunctival flap above the cornea, made an opening into the anterior chamber through the sclera, and excised a piece of sclera from one of the lips of the wound. In course of time an iridectomy was combined with this excision of the sclera. The operation is still popular on the continent of Europe. In England and in this country used almost to the entire exclusion of Lagrange's operation is that of Elliot, who dissects the conjunctiva well back into the corneal layers at the margin of the cornea, and then makes a trephine opening into the anterior chamber, permanently removing a disc of sclera cut out by the trephine (Fig. 5). The lower half of the illustration suggests the later form of the filtering bleb. In the course of time most operators added iridectomy to their trephine technic. The first thought of Lagrange and Elliot appears to have been that a permanent passage from interior to exterior of the eye could be established by mere excision of a piece of sclera beneath the conjunctival flap. Unfortunately, here as elsewhere, nature tends to fill the gap with new and very solid scar tissue, and in many cases in which the operation was limited to removal of a piece of sclera the tension, while at first greatly reduced, subse-

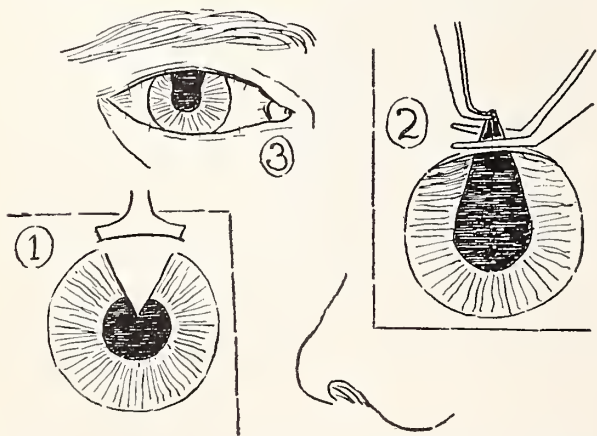


Fig. 4. 1, lance keratome carried into anterior chamber; 2, iridectomy; 3, postoperative appearance of pupil.

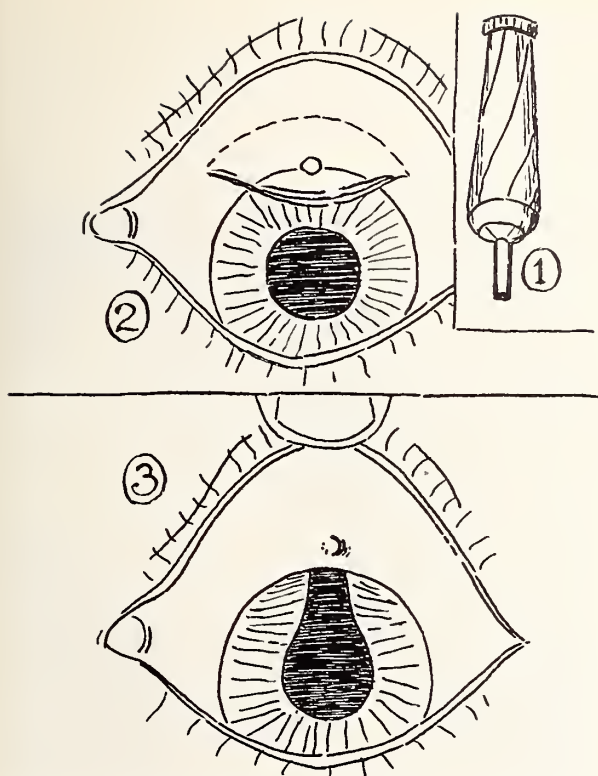


Fig. 5. Trephine operation. 1, the trephine; 2, showing position of trephine opening into anterior chamber; 3, postoperative appearance of pupil (when iridectomy has been performed with trephining) and approximate position of the filtration bleb.

quently rose again to pathologically high levels.

A more recent operation involves a procedure which, when first proposed, seemed to run counter to all previously existing conceptions of safety in ocular surgery. This operation, in several variations, purposely takes a part of the iris from the interior to the exterior of the eye and leaves it lying outside the sclera although beneath the conjunctiva. Ophthalmologists have always been extremely reluctant to leave iris tissue outside the eyeball because they had learned from experience that exposure of the iris to the external world was likely to be followed by chronic and destructive inflammation. But fortunately it has been found that if the iris tissue lies beneath a sufficiently thick flap of conjunctiva these inflammatory symptoms do not arise.

The operation to which I refer, known as iridencleisis or iridotaxis, because of the incarceration of the iris between the lips of the scleral wound, was devised by Holth and Borthen. Holth had noticed that the

more successful of the earlier iridectomy operations in cases of simple glaucoma were raggedly performed, so that tags of iris tissue were left in the scleral wound. He therefore dissected back a wide conjunctival flap, drew out the iris, and cut it in a meridional direction so as to make it lie more freely upon the sclera, but excised nothing. He then sutured the conjunctival flap in its

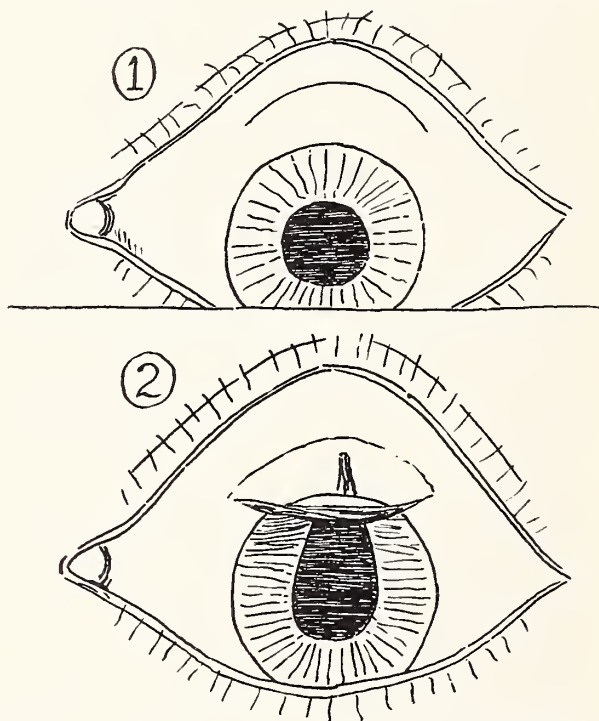


Fig. 6. Iridencleisis operation. 1, conjunctival incision; 2, tag of iris lying on sclera before conjunctiva is replaced.

original position (Fig. 6). The remarkable fact about eyes which are subjected to this operation is that they usually develop practically no postoperative inflammation, but run an extremely comfortable course. The scleral wound closes, but the pigment of the iris is very persistent, and the presence of this pigmentary tissue in the scar apparently insures the establishment of minute drainage channels.

The trephine operation and Holth's iridencleisis have both resulted in large numbers of permanent cures of simple glaucoma. Some interesting comparisons may be made between the two operations.

The use of the trephine is accompanied by appreciably more risk of accidental traumatism to important ocular structures, and has rather often been followed by chronic inflammation of the iris and ciliary body.

On the other hand, there is no question that the trephine operation produces prompt and radical lowering of intraocular tension, although unfortunately such a degree of lowering of tension seems often itself to be injurious to the eye.

Iridencleisis does not produce so much immediate lowering of tension, and after primary healing has occurred this operation sometimes appears for a while to have been inadequate in reduction of tension. But the interesting fact in this connection is that the great majority of iridencleisis operations show an ultimate reduction of tension much more marked than during the first month or two. This operation is simple and safe to perform and carries with it very little risk of accidental traumatism. According to most of those who have used iridencleisis, it is almost entirely free from risk of post-operative inflammation of the iris or ciliary body.

There are still a number of prominent eye surgeons who shrink from the use of iridencleisis because it seems to them contrary to good surgical principle. This attitude, and some other points of interest in the development of glaucoma surgery, are well illustrated by the statement of Luther Peter and W. H. Wilmer, who frankly declare that they have avoided using this operation because of general principles and not because of adverse experience.

Yet an enormous mass of experience has been accumulated by clinicians to show that iridencleisis is not only a very effective, but an extremely safe, operation for simple glaucoma. It is desirable to emphasize the fact that the complete results from this operation, as already mentioned, may not be attained for a long period. This might be regarded as a serious objection. But all that is necessary as a rule in the interval is a moderate use of pilocarpin, which in such eyes produces a much more striking fall of tension than in unoperated eyes.

In the matter of technic, a very important factor is the making of a sufficiently high conjunctival flap, so that the prolapsed iris does not lie in close proximity to the conjunctival wound. Neglect of this precaution may make the difference between a quiet

and an inflammatory postoperative course

The character of the fistula developed in these cases is well illustrated in a cross section from one of Holth's patients who died



Fig. 7. Holth's cross section showing pigment in iridencleisis fistula in patient who died five years after operation. Arrows point to pigment.

five years after operation (Fig. 7). In this cross section the presence of iris pigment in the fistulous channel is distinctly visible.

So far as I am aware the first iridencleisis operation performed in Denver was done in December, 1928. A second operation was performed on the same patient about three months later. This patient has not used miotics at all since the second operation, and the condition of his eyes has remained essentially unchanged during that time.

To illustrate the simplicity and ease with which iridencleisis may be performed, I may mention a case in which trephining would certainly have proved difficult and dangerous. An extremely timid and neurotic woman of 77 years had lost the right eye from glaucoma before coming under my care, and for several years had refused operation upon either eye, although both the blind and the seeing eye were incompletely controlled by miotics. The vision of the left eye, under my observation, gradually fell from 5/5 to between 5/15 and 5/12. At this point the blind right eye developed an inflammatory rise of tension which I could

not control with miotics, and finally the patient gave her consent to operation.

In the operating room, in spite of careful preparation, the patient was extremely unruly, kept insisting in a very loud voice that she could not go through with the ordeal, and talked incessantly while the actual operation was being performed. It was necessary to make the conjunctival flap and keratome incision very hurriedly, to draw out and incise the iris speedily and even roughly. Yet both eyes ran a perfectly uncomplicated postoperative course, and for over three years both eyes have retained tension well within the normal limit, without the use of miotics, as compared with tension of 40 to 50 and 28 to 30 mm. (Schiötz) under miotics before operation.

In two cases I have been able to apply this operation to relief of tension in eyes upon which iridectomy had been performed with incomplete success a good many years earlier. In each of these cases I drew out under the conjunctival flap iris tissue from one margin of the old iridectomy, without further cutting of the iris. The results have been extremely satisfactory.

I regard the prognosis of cases of simple glaucoma in which iridencleisis is early resorted to as much more favorable than that of cases in which treatment with miotics is maintained over a prolonged period. From my own practice, the iridencleisis operation has removed in very large degree the old dread of this most treacherous disease.

ABSTRACT OF DISCUSSION

Melville Black, M.D., Denver: I have been a convert to the trephine in simple, non-inflammatory glaucoma almost since the inception of this operative procedure and it has been, naturally, very hard for me to depart from it. One is very likely to feel that any operation which gives him good results is the operation which is best adapted to his purposes and the trephining operation has given me most excellent results. It is a plumbing job. We are creating artificial drainage. The normal drainage channels are closed and the desire is to bring about drainage which will be permanent.

When the iridencleisis operation came in vogue, we tried it on several cases at the clinic at the University of Colorado and as Dr. Crisp has mentioned, the results were slow. I had been in the habit of seeing tension from a trephining come down suddenly, the eyeball be subnormally soft, whereas with the iridencleisis the tension would be perceptibly elevated. But it did come down later.

There has been a gradual swinging of opinion,

I think, toward the iridencleisis operation so that men who believed as I did about trephining felt probably we had in iridencleisis an operative procedure which would prove as satisfactory, a little easier to do, did not involve as high a degree of operative technic and would ultimately be as satisfactory.

Glaucoma is one of the unfortunate diseases that sometimes goes along until practically we are going to lock the barn door after the horse is stolen. Take, for example, a man with glaucoma in one eye and with pretty good vision in the other. But he has a glaucoma there, too. He is holding the tension in the better eye with miotics, but the field has been slipping, until it has finally slipped over the fixation point and that is the danger. As this field begins to go and creeps toward the fixation point, ultimately the fixation point is involved in this blind field and it never comes back. You can operate to the end of time and the field does not come back. That patient has lost his ability to fix his central vision, which is gone forever. The peripheral field is only of use for getting around.

If you are going to operate on these cases, the field must be closely watched and when it begins to get within about 10 or 15 degrees of the fixation point operation must not be delayed. If it is, when at last you operate the probabilities are that the blind field will jump over the fixation point and then the patient will have lost his central vision.

R. W. Danielson, M.D., Denver: It would be very unfortunate if the impression got about that all cases of glaucoma should be operated upon. Every case of glaucoma should be watched carefully and everything taken into consideration before surgery is attempted. I have in mind at the present time the case of a man who was operated upon about five years ago by the trephine method. At the time the lens was dislocated, vitreous was lost, and the eye is blind today. I am now watching that man, taking fields every three months. I have kept him under pilocarpine; his field has stayed up and his tension down. That man has a distinct fear of another operation and I think he should never be touched as long as he is staying as well as he is.

We have recently had introduced the use of 1 per cent suprarenalin to hold the tension. I think it bears a distinct future. I have at the present time one man under its use. One drop twice a week, when combined with pilocarpine, keeps the tension down.

As to the choice between trephining and iridencleisis, I am swinging definitely to iridencleisis for the reason that I have seen one eye lost at the time of operation and two eyes lost from subsequent infection after trephining. One man came to the clinic about three years ago with an anterior chamber completely full of pus, and I have seen one man in whom the same late complication has occurred.

Dr. Crisp (closing): Briefly, I should like to take issue on two points with the speakers. In the first place, I don't believe that any case of glaucoma should be allowed to lose as much field as down to within 15 degrees of the fixation point before operating, unless the patient absolutely refuses to consider operation. Personally, I think every case of glaucoma would be better operated on before it had lost any appreciable amount of field and the prognosis for satisfactory results from operation is very much greater, especially with the very safe iridencleisis operation, if it is done very early in the course of the disease—as soon as the diagnosis is thoroughly

established and the patient has had time to observe his own case long enough to feel some assurance as to what needs to be done.

I differ from Dr. Danielson in thinking that now we have so safe an operation every case of simple or primary glaucoma should be operated upon. I think we shall save the vision of many more eyes by working on that principle. The risk is very slight with iridencleisis, practically none at all, especially with the large flap, and I think it is very desirable to operate.

One or two points that Drs. Black and Danielson have mentioned illustrate the reason again why iridencleisis is to be preferred to trephining. In two or three large clinics of Europe in which very large numbers of cases have been operated upon on the one hand by trephining and on the other hand by iridencleisis, the freedom from operative and postoperative complications is very much in favor of the iridencleisis operation, although in good hands trephining has given a very high percentage of excellent results.

THE DENVER SEWAGE PROBLEM*

IVAN C. HALL, Ph.D.
DENVER

At a meeting of the Denver Public Health Council on November 20, 1933, there was circulated "An Open Letter" upon the Denver sewage problem signed by a Committee of the Colorado State Medical Society in which reference was made to "data presented to the Colorado State Board of Health by the State Sanitary Engineer, the State Department of Bacteriology, the Department of Bacteriology of the University of Colorado and the United States Public Health Service."

I assume that the above letter has been widely read, but the reference to the Department of Bacteriology of the University of Colorado is probably an error, because so far as I know no data have been presented to the State Board of Health upon the subject of the Denver sewage problems from this department.†

On the other hand, the moral and legal responsibility of the city of Denver for the serious contamination of the South Platte River by untreated sewage seems clear, and it is highly desirable that the city should, as soon as possible, take the necessary steps for the correction of this evil. There is no question that the inhabitants of the Platte valley below Denver suffer every year from attacks of intestinal disease attributable directly or indirectly to this pollution. The records of the State Board of Health as well as those of the Colorado General Hospital show that a disproportionate number of cases of typhoid, paratyphoid, and dysenteric fever arise in this area.

We feel, however, that undue emphasis is being placed on the danger to the residents of Denver through the eating of vegetables raised in the bottoms of the Platte River. Surely if this were a major condition there would be many more cases of intestinal disease in Denver than are at present recorded.

It is inevitable, of course, that *B. coli* will be found upon the exterior of vegetables grown in well manured soil or irrigated with polluted water. Most of these are doubtless derived from animal sources, though in the case of sewage irrigation many of them may come from human sources; there is no way known as yet to distinguish animal *B. coli* from human *B. coli*.

In extreme cases, *B. coli* from human sources may be accompanied by human intestinal pathogens such as *Bacterium typhosum*, *B. paratyphosum*, *B. dysenteriae*, *Vibrio cholerae*, *Entameba dysenteriae*, as well as parasitic worms. Such contamination is, however, always superficial; there is no evidence known to me that human pathogens can penetrate the living tissues of healthy plants.

Superficial contamination is generally removed when vegetables are prepared for the table, and the danger of infection from eating contaminated fresh vegetables is, of course, always restricted to those which are eaten raw; cooking destroys all of the intestinal pathogens.

In many cases the outer leaves of vegetables eaten without cooking are removed and the parts are generally washed. This applies to cabbage, onions, lettuce, and celery. The data recently published by the Colorado State Board of Health¹ clearly

*From the Department of Bacteriology and Public Health, University of Colorado School of Medicine and Hospitals.

†See page 521, this issue.

prove the efficacy of washing to remove *B. coli* from carrots, beets, and celery. Momentary dipping in boiling hot water as advocated by Mills, Bartlett, and Kessell² would be an additional safeguard. Incidentally these writers have most authoritatively reviewed the whole problem of the danger to human health through the eating of fecally contaminated vegetables and fruits. Under our conditions it would seem that the physiologic benefits derived from the eating of fresh fruits and vegetables must surely outweigh the dangers of intestinal infection if even the most ordinary precautions are followed.

It should be further appreciated in the beginning that it is at least controversial whether any method of sewage "purification is sufficiently practicable or reasonable in cost, when applied on a large scale, to yield an effluent safe for drinking purposes. About the most that can be hoped for is an effluent which, when mixed with the usually meager flow of the South Platte river, will be free from objectionable sights and odors, will not too greatly depress its soluble oxygen content or too greatly increase its biochemical oxygen demand, will not kill the fish, and will contribute to the water only a minimum of danger from human intestinal pathogens.

I do not wish to be misunderstood, because I feel strongly that the city of Denver should comply with the state law prohibiting the pollution of public streams by constructing a suitable sewage disposal plant which will at least prevent the appearance in the Platte River of the unsightly and malodorous substances which now adorn its waters. This is, however, not so much a matter of self-protection of the citizens of Denver from an epidemic of intestinal disease, as it is a legal and moral duty to those people who live in the Platte below Denver.

REFERENCES

¹Denver Sewage Problem. Sanitary Survey. (A letter addressed by S. R. McKelvey, M.D., October 19, 1932, to the Hon. George D. Begole, Mayor of the City and County of Denver.)

²Mills, R. G.; Bartlett, C. L., and Kessell, J. F.: The Penetration of Fruits and Vegetables by Bacteria and Other Particulate Matters, and the Resistance of Bacteria, Protozoan Cysts and Helminth Ova to Common Disinfection Methods. *The American Journal of Hygiene*, 1925-5-pp. 559-579.

CASE REPORTS

HYPERINSULINISM*

W. C. HOWELL, M.D.

COLORADO SPRINGS

Hyperinsulinism is a term first used by Dr. Seale Harris when he reported several cases in 1923 which were characterized by numerous nervous symptoms. All carried fasting blood sugars below 70 mgs. per 100 c.c. of blood. These cases of pronounced low blood sugar which have come to autopsy have shown marked enlargement of the pancreas, particularly of its tail. Some of the glands weigh as much as 350 grams. This enlargement in some cases is cancerous, while in others there are large accumulations of the Islands of Langerhans. Some cases have shown these collections to exist in the head of the pancreas, and some have shown Langerhans tissue in the retro-peritoneal lymph glands.

Blood Chemistry

The fasting blood sugar in health is above 80 mgs. per 100 c.c. of blood and below 120 mgs. One or two hours after eating the blood sugar does not rise above 140 mgs. in health. Of course, there are numerous things which cause a variation above or below normal; in fact, they are too numerous to have any place in this discussion, but none of them causes as low blood sugar as is found in hyperinsulinism.

Symptomatology

The symptoms of hyperinsulinism are varied and range from weakness in the early morning and, after vigorous exercise, to attacks of unconsciousness and even to epileptic seizures. Dizziness, nervousness, and loss of memory are frequent symptoms. Intense hunger before dinner and supper is one of the symptoms, but some of Wilder's cases rebelled against food and had to be fed by force.

Diagnosis

The diagnosis is not difficult after one

*Read before the El Paso County Medical Society, Colorado Springs, October 11, 1933.

begins to think of hyperinsulinism, because the one way to settle it beyond doubt and without delay is by way of the blood sugar calculation. The starting point is to think of hyperinsulinism in all cases of unusual weakness, nervousness, and spells of unconsciousness, accompanied by abnormal hunger. Every epileptic is entitled to a careful check. The toxic psychosis possibilities are considered. Some of these cases have been handled as cases of drunkenness for a time; the hunger before meals has caused diagnoses of peptic ulcer. Neurasthenia has been the diagnosis in several cases and the profound weakness of others led to a diagnosis of Stokes-Adams syndrome.

Treatment

The treatment consists of frequent feeding continued until bed time, even into the night in severe cases. Some patients have responded to the two hour feedings, while others have to be fed every hour. My patient was often unable to walk to the bathroom in the early morning and had to crawl along the floor, if assistance was not available, until frequent feedings were started. This profound weakness always passed away after breakfast. The character of the feedings is not so important as the frequency, although Waters favored the feeding of low carbohydrate and high fat, with moderate protein ratio, presuming that the low carbohydrate did not so greatly stimulate the flow of insulin as did high carbohydrate. Orange juice and candy will ward off impending unconsciousness. The cases in which stupor or profound unconsciousness should have glucose solution intravenously at once. Patients allowed to remain unconscious two days or more usually die.

CASE REPORT

White female, aged 38, married, housewife.

Family history, negative except that two sisters are very nervous. No familial diseases seem outstanding in the history.

The patient was a normal healthy baby, breast fed for two years and was healthy during this time. She walked, talked and stood alone at the usual ages and the teeth erupted at normal times. Had measles at 5, not very sick but had scarlatina at 8, which was severe in nature and followed by dropsy which disappeared in three months. Had chicken pox, smallpox, and mumps in early childhood, but none was severe. Had appendicitis at 12, not operated. Menstruation began at 15

and soon became regular and painless. Had several more attacks of appendicitis and at 18 had appendix removed under ether anesthesia, with a prompt recovery. From 5 to about 21 years of age had a rather chronic cough and various aches and pains that could not be explained. A few months after appendectomy she began having so-called sinking spells, with at times extreme nervousness and excitability. Patient was not in good health when she married at 21 years and promptly and rapidly lost weight. She gives no history of abortion or miscarriage. At 23 she had hemorrhoids removed with severe bleeding afterwards.

During all these years she continued to have spells of profound weakness. Pregnancy occurred at 25; normal pregnancy, labor and puerperium; healthy baby. Two years later she became pregnant again but had an assortment of migratory pains, gained a lot of weight, but still had her weak spells. This labor was protracted and severe. At 27 she was operated on for inflamed tubes and displacement of the uterus, the tubes being taken out and the uterus suspended. This operation gave very little relief. For the last three years she has had much abdominal pain, with profound weakness and swelling of the feet and legs. Physical examination revealed much emaciation; weight 98 pounds. Appearance, sallow; nervous; heart, negative; chest, negative; much tenderness over the abdomen. Rectal and sigmoid examination reveals moderate redness throughout. Vaginal examination reveals an unrepaired laceration of the perineum with a laceration of the cervix. None of the laboratory findings of blood count, urinalysis, gastric analysis and feces examination revealed any definite deviation that pointed to a diagnosis, except the blood sugar calculation, which showed 57 mgs. per 100 c.c. No treatment has been given except two hour feedings until bedtime each night and a glass of milk a half hour before leaving bed in the morning. Patient is now able to do most of her housework but is not willing to have hourly studies of her blood sugar. One test done one and one-half hours after a breakfast of 300 calories revealed blood sugar of 120 mgs. It is probable the fasting blood sugar remains the same.

This case represents the typical symptomatology of hyperinsulinism in a degree, not extremely severe, which could easily have defied diagnosis almost indefinitely. It is hoped this review may cause this condition to be considered more frequently in the differential diagnoses of obscure syndromes.

It should be remembered that in every populous community the medical profession is confronted with the problem of supplying adequate and trustworthy attention to the low-salaried individual at a price which he can pay; and it is time for medical men to meet this problem with a solution that is fair to all concerned and not permit laymen to thrust upon us a plan that is objectionable from every standpoint.—Reprint, Bulletin of Los Angeles County Medical Association.

PUBLIC HEALTH NOTES

EDITOR: J. W. AMESSE, M.D.

Destruction of the Vitamins by Pasteurization

The only vitamin which has been shown to be destroyed by pasteurization is vitamin C, and the destruction is only partial. The only disease due to a vitamin deficiency, which has been shown to be associated with the use of pasteurized milk, is infantile scurvy. This disease results from a deficiency of vitamin C, and in some of the cases reported the cause was traced to the use of milk which had been pasteurized more than once. However, even on complete diets of efficiently pasteurized milk, the danger of mild scurvy must be considered to exist, and diets for children should always be supplemented by other sources of the anti-scorbutic agent, e. g., orange juice. This practice is widespread today, but it is not generally recognized that any ordinary bulk milks, whether raw or pasteurized, represent comparatively poor and variable sources, not only of vitamin C, but of certain other vitamins. Under these circumstances there is considerable force in the argument that dependence on complete milk diets as efficient vitamin sources should be discontinued. The merit of including raw milk in the diet of young children for the prevention or arrest of dental caries has been demonstrated, but the contention that pasteurized milk is not an efficient agent has been shown to be unproved.—“The Nutritive Properties of Milk in Relation to Pasteurization,” J. D. Stirling and J. H. Blackwood. *Hannah Dairy Research Institute, Bulletin 5.*

Toxic Amblyopia and Accompanying Physiological Disturbances in Carbon Tetrachloride Intoxication

Toxic amblyopia may result from exposure to carbon tetrachloride vapor. The resulting amblyopia is characterized by concentric constrictions of all the color fields without central scotomata. The resulting amblyopia differs from the usual toxic amblyopia, of which that due to carbon bisulphide is typi-

cal, in that the color fields in the latter are marked by central scotomata with a normal periphery. With cessation of exposure, and a high calcium and dextrose diet, the amblyopia rapidly disappear. Routine examination of the visual fields of workers exposed to the vapor of carbon tetrachloride is suggested to detect intoxication at an early stage.—Zolton T. Wirschafter, M. D.

Child Labor

At the hearing held September 6, the National Child Labor Committee submitted a brief pointing out that this is a highly hazardous industry in many of its processes, and urging that the employment of minors under 18 years of age be prohibited in construction work, except in non-hazardous work on private dwellings.

The National Child Labor Committee also submitted a brief asking that the 16-year age minimum for employment in the paper and pulp industry code be supplemented by an 18-year age minimum in departments where the accident frequency rate or the accident severity rate exceeds the average for all industries in the United States.

Protest was also entered by the National Child Labor Committee against the learners' clause in the proposed hotel industry code, which allows a six months' learning period during which wages might be as low as 70 per cent of the minimum rates otherwise prescribed; and these in turn seem unnecessarily low.

The proposed codes for the retail trade, groceries, and drug stores follow the blanket code in allowing the employment for three hours a day of children between 14 and 16 years. These codes are still undergoing revision, however. Mr. Le Boutillier, head of Best & Company, of New York City, has had the courage to recommend that all exceptions to the 16-year age minimum for employment be eliminated from the code.

Orphaned in Terms of Mortality Statistics

The sorriest victims of the premature death of adults are the children who thereby become orphaned of father or mother or both. And, conversely, one of the greatest

boons resulting from the modern improvement in mortality is the saving of innumerable children from the fate of orphanhood. Just what this means to the present and future generations can best be realized by a computation which contrasts the number of orphans that result from the mortality prevailing at the present time, with the corresponding number that would have resulted under the mortality conditions at the beginning of the present century.

Saving in Orphans Under 17 Years of Age by Improvement in Mortality in 1930 Over 1901.

Condition of Orphanhood	Number of Orphans on Basis of Mortality		Savings in Number of Orphans by Improvement in Mortality
	1901	1930	
Father alone dead	2,726,000	1,739,000	987,000
Mother alone dead	1,931,000	1,168,000	763,000
Both parents dead	545,000	178,000	367,000
Total	5,202,000	3,085,000	2,117,000

Food and Nutrition

Definite conclusion about nutrition were drawn from studies of the following foods:

Microbiology of Frozen Foods. The Survival of Pathogenic Microorganisms in Ice Cream: Numerous studies have been made on the longevity of pathogenic microorganisms in dairy products with the exception of ice cream. This product has no doubt been neglected because freezing was thought to be destructive to microorganisms. However, numerous epidemics of disease have been traced to ice cream. Since tuberculosis is the most important disease transmitted by dairy products the longevity of these organisms in ice cream was studied. The results suggest that ice cream should not be considered as a safe food just because it is frozen.—By G. I. Wallace and Rhoda Crouch, J. Dairy Sci. 16:315 (July), 1933.

The Vitamin B and G Content of Wheat Germ, Rice Polishings, Cottonseed Flour and the Residue from Fermented Rye Flour: The samples of wheat germ, cottonseed flour and rice polishings were found to be excellent sources of vitamin B. All three substances contained approximately one-half as much of the anti-neuritic factor as did a composite sample of dried yeast. As a source of vitamin G they differed widely. Wheat germ

was found to be the richest of the three substances, containing about one-sixtieth as much vitamin G as did the yeast. Cottonseed flour was found to have about one-tenth as much of this vitamin as yeast, while rice polishings had only about one-twentieth. Whole wheat (soft winter) was found to be a relatively poor source of both vitamins B and G. The flour made from the residue from fermented rye grain contained a very small but appreciable amount of vitamin B.—Hazel E. Munsell and Grace M. Devaney, Cereal Chemistry, 10:287 (July), 1933.

Vitamin C Content of Baldwin Apples and Apple Products: Since Nelson and Mottern, in 1932 (A. J. P. H. 22, 6:587-600, June, 1932), reported that lead arsenate sprays applied to orange trees considerably reduced the vitamin C content of the fruit, and since apples are almost universally sprayed with arsenic compounds and other toxic substances, the present investigations were undertaken to compare sprayed and unsprayed Baldwin apples grown in Massachusetts. The sprayed apples were found to be fully as rich in vitamin C as the unsprayed apples. Four gm. daily of either sprayed or unsprayed Baldwin apples per 300 gm. guinea pig, gave excellent weight gains and full protection from scurvy. In two of three tests the sprayed fruit appeared to contain slightly more vitamin C than the unsprayed. Tests were also made to determine the effect of storage on vitamin C. In four to six months of storage, at 360 degrees F., Baldwin apples lost about 20 per cent of their vitamin C content; in eight to ten months the loss was nearly 40 per cent. Freshly expressed Baldwin apple juice was found to be nearly as rich in vitamin C as the fresh apples. Little loss occurred during the first twenty-four hours after extraction. However, benzoated or pasteurized ciders, over forty-eight hours old, failed to retain an appreciable quantity of vitamin C. Canned Baldwin apple sauce, either strained or unstrained, proved to be a poor source of vitamin C, the unstrained being somewhat superior to the strained.—C. R. Fellers, M. M., Cleveland, and J. A. Clague, J. Agri. Res. 46:1039 (June 1), 1933.

The Iodin Content of Hens' Eggs as Af-

fectured by the Ration: The common use of eggs in the human dietary, especially for infants and invalids, and the rather extensive use of iodine in the treatment of endemic goiter, make it desirable to have further information on the extent to which the iodine content of eggs is affected by the iodine intake of the bird. The amount of iodine in eggs is independent of the form in which it is fed to the bird, and the percentage of iodine in eggs immediately decreases upon the discontinuance of iodine feeding. The authors express the opinion that whether eggs of a known iodine content have a particular place in human nutrition depends upon whether the iodine requirements of the people of a given locality are provided from other sources. It is common knowledge that the sections are deficient in iodine, and that some natural foods and drinking water of certain form of medication must be resorted to in order to prevent and control endemic goiter, but how this can be best accomplished is an open question.—O. H. M. Wilder, R. M. Bethke, and R. P. Record, *J. Nutrition* 6:407 (July), 1933.

Specificity of Hexuronic (Ascorbic) Acid as Antiscorbutic Factor: Various experiments and studies led to the conclusion that "hexuronic acid is itself vitamin C and they recommend the adoption of a specimen of hexuronic acid as an international standard of vitamin C activity." Leslie Julius Harris and Surendra Nath Ray, *Biochem. J.* 27:580, 1933.—From "*American Journal of Public Health*," October, 1933.

Is the Urban Birthrate Falling Faster Than the Rural?

Provisional figures recently released by the United States Bureau of the Census seem to indicate that the fall in the birthrate so characteristic of the present time is largely concentrated in urban districts; that the decline is much less marked in rural areas, and, in fact, that in a number of states rural areas experienced an actual increase of the birth-rate, from 1931 to 1932.—*Statistical Bulletin, Metropolitan Life Insurance Co.*, June, 1933.

BOOK REVIEWS

Report to the United States Government on Tuberculosis With Some Therapeutic and Prophylactic Suggestions. By Adolphus Knopf, M.D. (N. Y. Univ. and Paris.) Procurable at the Office of The National Tuberculosis Association, 450 Seventh Avenue, New York City. 59 pages.

This volume of 59 pages is a revised and enlarged report submitted to the State Department, War Department, and War Veterans Bureau as Government Delegate to the International Union Against Tuberculosis held at The Hague, Sept. 6 to 9, 1932. Surgeon General Patterson of the United States Army has been very liberal in his praises of this work. Modern therapeutic methods in the control and prevention of tuberculosis are thoroughly covered and well illustrated. Gold therapy, diaphragmatic respiration, physical and respiratory therapy, and BCG preventive inoculation in children are described. General and dietary care, prevention of relapses, and rehabilitation of the cured case occupy separate chapters.

Every physician dealing with tuberculosis will be well repaid for the little time required to read this book.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 17, No. 1. (New York Number—July, 1933.) Octavo of 324 pages with 64 illustrations. Per Clinic year, July, 1933, to May, 1934. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

This number of the clinics contains a wide variety of subjects. There are eight clinics devoted to disease of the heart and blood vessels showing how these conditions are engaging the attention of clinicians in increasing measure. Infectious diseases are represented by clinics on Pneumonia, Allergic Manifestations of the Common Cold, the treatment of Pertussis with Gold Tribromide, and Epidemic Cerebrospinal Meningitis. It also contains interesting clinics and reports on such varied subjects as Hypertrophic Gastritis, Hypo- and Hyperglycemia, Anemia, Hodgkins Disease, and Skin Tumors. An interesting and stimulating number.

LORENZ W. FRANK.

Minor Maladies and Their Treatment. By Leonard Williams, M.D. Sixth Edition. Baltimore: William Wood and Company, 1933. 420 pages. Price \$3.75.

This practical little volume is obviously written by a physician rich in experience and common sense, as well as up to date in his knowledge. It covers the more common complaints for which we are consulted and that complicate the more major morbidities. Considerable space is devoted to niceties of therapeutics we all have known but have forgotten.

One criticism is the author's sanction of certain proprietary remedies and the use of their patent names. This is an evil to be opposed and never given space in an ethical scientific medical publication.

The book reads like a novel. One appreciates the easy style and is reminded of the pleasing authorship of Dr. Axel Munthe in his "Story of

San Michele." It is worthy of the time of any physician doing general work and cultivating the art of medicine.

Practical Hematological Diagnosis. By O. H. Perry Pepper, M.D., Professor of Clinical Medicine, University of Pennsylvania; Assistant Chief of the Medical Clinic, Hospital of the University of Pennsylvania; and David L. Farley, M.D., physician to the Pennsylvania Hospital, Phila.; and to the Cooper Hospital, Camden, N. J.; Associate in Medicine, University of Pennsylvania. Pp. 562, with 3 full-colored plates. Cloth. Price, \$6.00. Phila.: W. B. Saunders Co.

General practitioners, as well as hematologists and general diagnosticians, have long wanted a work on the blood, telling definitely, in simple terms: how to examine the blood; how to interpret the blood picture in clinical terms; how to use to the fullest the many new aids of practical hematology. This is precisely what these two experienced practitioners, teachers, and authors present in a book planned for office and bedside practice. Here are the established facts of hematology—the tools and the technic of their use. Blood pictures become of definite practical significance!

Growth and Development of the Child. Part III.

Nutrition. Report of the Committee on Growth and Development. Kenneth D. Blackfan, M. D., Chairman. White House Conference on Child Health and Protection. New York, London: The Century Co. 519 pages, price \$4.00.

This volume contains the latest, most authoritative and comprehensive epitome on the fundamentals of nutrition in infancy and childhood that has appeared for a long time. It consists of contributions from thirty-one of the leading pediatricists, physiologists, and medical educators of this country. They have appraised from a vast amount of material the controversial problem of satisfactory growth and development, giving some reasonable standards for the normal.

The average American diet is studied from the standpoint of the national food supply with an explanation for the causes of an inequitable supply resulting in certain nutritional disturbances. Each component of our usual food is then analyzed, giving the quantitative amounts of each substance required for optimal growth and normal nutrition. The relation of certain amino acids to growth and development forms a most interesting chapter. The protein requirements of infants and children, the biological value of these substances, the diseases which may result of underfeeding or overfeeding proteins, the normal requirements and the allergic manifestations which may follow their ingestion are suitably explained. In the same meticulous manner each of the fundamental components of food as carbohydrates, fats, vitamins, water, minerals and "trace" substances are treated. In many instances the source of these fundamental materials is traced, followed through digestion, absorption, and excretion showing how they alter metabolism and how they affect growth and development.

The chapters dealing with vitamins are most instructive. Besides the usual information given upon the source of vitamins and the common diseases which their deficiency produces, there are eleven pages on the actual pathology, both gross and microscopic, which develops because of these deficiencies.

Perhaps the most scholarly portion of the book is that which deals with the factors governing the energy requirements of children from birth

through childhood. Here basal metabolism is explained as well as the many factors affecting it.

Finally the choice of foods, the effect of cooking, preserving and processing on their nutritive value receives much attention. The last chapters deal with feeding habits in children and the psychological factors that may alter normal nutrition.

The book should be had as one for study and reference. Its value is enhanced by the inclusion, after each chapter, of many excellent references. In all they total 725 citations.

WILFORD W. BARBER.

The History and Epidemiology of Syphilis. The Gehrman Lectures, University of Illinois. 1933. By Wm. Allen Pusey, A. M., M. D., LL. D., Professor of Dermatology Emeritus, University of Illinois. Sometime President of the American Dermatological Association and of the American Medical Association. Springfield, Illinois. Baltimore, Maryland: Charles C. Thomas. 1933. 133 pages, price \$2.00.

This book, as the author states in its preface, is an elaboration of an earlier similar volume brought up to date and comprises the 1933 Gehrman Lectures at the University of Illinois. The book clearly and chronologically sets forth the salient points of the much debated origin of syphilis. An outline of its history is delightfully and dramatically recounted. Included in the work is a chapter of very valuable information concerning the modern problems of syphilis—its epidemiology, social, and sanitary aspects as well as the statistics of its present status.

Not the least feature of this book is an extensive list of references. It contains also a good collection of portraits of those physicians and scholars whose work and research have advanced our knowledge of this disease. The volume while comparatively short is an excellent reference. Its reading will prove not only highly instructive but vastly interesting and fascinating. It will be a very popular addition to our library.

O. S. PHILPOTT.

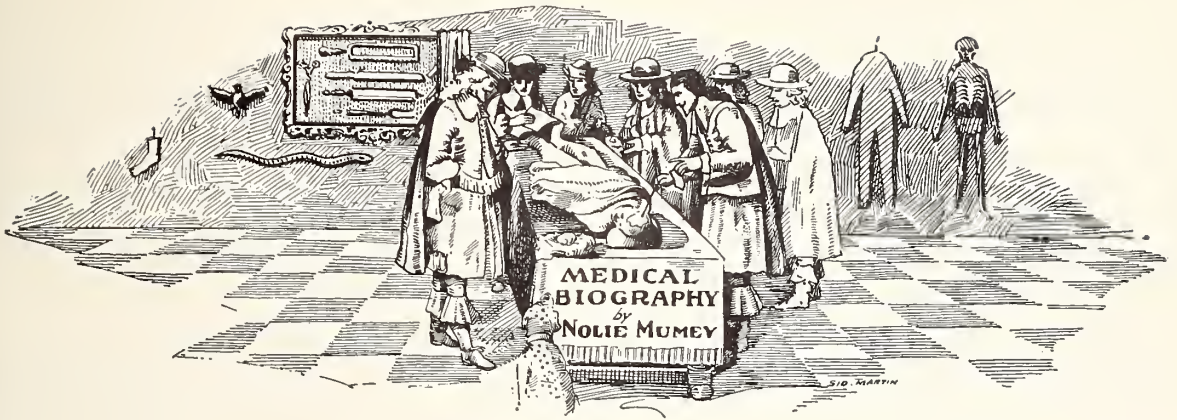
Frontiers of Medicine. By Morris Fishbein, M.D., Editor Journal A. M. A. One of the Century of Progress Series of books on fundamental sciences. Baltimore: The Williams and Wilkins Co., in cooperation with The Century of Progress Exposition. 1933. 207 pages, price \$1.00.

This attractively bound volume is one of a series by well-known scholars presenting the essential features of the fundamental sciences which are the foundation stones of modern industry.

Dr. Fishbein has ably covered far more than "a century of progress" in medicine. In fact, he covers medical history from the beginning in his well-known terse manner. The first fifty pages read like any good brief medical history, discussing the magic and mysticism before Hippocrates. Follows then the scientific medicine and the discoveries and teachings of such scholars as Galen, Paracelsus, Vesalius, and Harvey. The author enters the essentials of practical medicine with the development of preventive methods, anesthesia, germ conception and asepsis, and the rise of the specialties.

The book is written for intelligent laymen who are interested in furthering their knowledge of the development of one of the great sciences. It is a good review for a doctor of medicine.

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SILAS WEIR MITCHELL

(Continued from November Issue.)

A beautiful eulogy of Cervantes was written by Dr. Mitchell in October, 1888. Cervantes, the author of *Don Quixote*, lost a hand at Lepanto and was in prison for five years at Algiers. He lived a sad life and died in poverty, April 23, 1616, the day of Shakespeare's death. There is an uncertainty as to where he was buried.

CERVANTES

There are who gather with decisive power
The mantle of contentment round their souls,
And face with strange serenity the hour
Of pain, or grief, or any storm that rolls
Destruction o'er the tender joys of life.

There are whom some great quest of heart or
brain

Keeps even-poised, whatever fate the years
May fetch to mock with lesser loss or gain,
And find brief joy in smiles, small grief in tears,
And tranquil take the hurts of human strife.

A few there be who, spendthrift heirs of mirth
Immortal, mock the insolence of fate,
And with a breath of jesting round the earth
Ripple men's cheeks with smiles, and gay, elate,
Sit ever in the sunshine of their mood.

Oh, royal master of all merry chords,
Of every note in mirth's delightful scale,
To thee was spared no pang that earth affords,
Nor any woe of sorrow's endless tale,—
Want, prison, wounds, all that has man subdued.

But, light of soul, as if all life were hoy,
Forever armed with humor's shining mail,
True-hearted, gallant, free from scorn's alloy,
When life was beggared of its best, and frail
Grew hope, 'tis said thou still wert lord of smiles.

This could I wish; and yet it well may be
Thy heart smiled not, for wit, like fairy gold,
Mayhap won naught for him who scattered glee,
No help for him by whom the jest was told,—
The world's sad fool, whose ever-ready wiles

Rang the glad bells of laughter down the years,
And cheated pain with merry mysteries,
And from a prison cell, the twins of tears,
Sent forth his Don and Squire to win at ease
Such joy of mirth as his could never be.
Ah, who can say! His latest day of pain
Took Shakespeare's kindred soul. I trust they met
Where smiles are frequent, and the saddest gain
What earth denies, the privilege to forget
"The oppressor's wrong, the proud man's con-
tumely."

But where he sleeps, the land which gave him
birth,
And gave no more to him, its greatest child,
Knows not today. Some levelled heap of earth,
Some nameless stone, lies o'er him who beguiled
So many a heart from thinking on its pain.

Yet I can fancy that at morning there
The birds sing gladder, and at evening still
The peasant, resting from his day of care,
Goes joyous thence with some mysterious thrill
Of lightsome mirth, whose cause he seeks in vain.

The sea gave Dr. Mitchell peace and rest
from professional labors and inspired him to
write many short poems:

EVENING BY THE SEA

With noble waste of lazy hours
I loitered, till I saw the moon,
A rosy pearl, hang vast and strange
Above the long gray dune!

And hither, thither, as I went,
My ancient friend the sea beside,
Whatever tune my spirit sang
The dear old comrade tried.

THE RISING TIDE

An idle man, I stroll at eve,
Where move the waters to and fro;
Full soon their added gains will leave
Small space for me to come and go.

Already in the clogging sand
I walk with dull, retarded feet;
Yet still is sweet the lessening strand,
And still the lessening light is sweet.

(To be Continued)

Secretarial Notes and Comment

Edited by Harvey T. Sethman, Executive Secretary

SIXTY-THIRD ANNUAL SESSION COLORADO STATE MEDICAL SOCIETY

Colorado Springs, September 14, 15, 16, 1933

PROCEEDINGS OF THE HOUSE OF DELEGATES

MINUTES IN DETAIL

First Meeting of the House of Delegates

9:50 a. m., September 14th, 1933.

President Stephenson: "Gentlemen, I am calling the House of Delegates to order for the sixty-third annual session of the Colorado State Medical Society. I will ask Dr. Garwood to act as Sergeant-at-Arms. As a preliminary, I will read the official call."

President Stephenson then read the official call.

"I will ask Secretary Frank to read the report of the Committee on Credentials."

Dr. Frank read the report of the Committee on Credentials, as follows:

REPORT OF THE COMMITTEE ON CREDENTIALS

To the House of Delegates of the Colorado State Medical Society:

Your Committee on Credentials reports that the Constituent Societies are entitled to representation in the House of Delegates at the Sixty-third Annual Session as follows, under the provisions of Chapter V of the By-Laws:

Society—	Membership on Dec. 31, 1932	Number of Delegates
Arapahoe	6	1
Boulder	37	2
Chaffee	8	1
Crowley	5	1
Delta	16	1
Denver	544	22
El Paso	95	4
Fremont	18	1
Garfield	13	1
Huerfano	11	1
Kit Carson	6	1
Lake	5	1
Larimer	32	2
Las Animas	18	1
Mesa	19	1
Montrose	7	1
Morgan	11	1
Northeast Colorado	21	1
Northwestern Colorado	14	1
Otero	27	2
Prowers	14	1
Pueblo	70	3
San Juan	17	1
San Luis Valley	16	1
Weld	45	2

Total members on	Total
Dec. 31, 1932	1,075 Delegates 55

The following list of delegates and alternates is presented as the original roll call of this House, these delegates and alternates being those duly elected by their respective constituent societies and properly certified to your Committee on Credentials.

Several blank spaces in the following list of delegates will be noted. In these instances constituent societies have failed to certify delegates to your Committee on Credentials, or they have certified as delegates men who are ineligible because of holding state society office:

Society	Delegate	Alternate
Arapahoe.....	W. C. Chrysler.....	H. B. Catron
Boulder.....	H. H. Heuston.....	C. H. Graf
".....	John Andrew.....	W. P. Woods
Chaffee.....	J. P. McDonough.....	C. R. Fuller
Crowley.....	W. M. Desmond.....	J. E. Jeffery
Delta.....	A. C. McClanahan.....	Lee Bast
Denver.....	H. I. Barnard.....	G. B. Kent
".....	K. D. A. Allen G. M. Blickensderfer	
".....	H. R. McKeen.....	J. E. Connell
".....	F. E. Rogers.....	H. I. Laff
".....	W. H. Halley.....	E. R. Mugrage
".....	G. E. Cheley.....	H. J. Corper
".....	Duval Prey.....	Arnold Minnig
".....	T. P. Sears.....	H. J. Freeland
".....	R. W. Danielson.....	L. V. Tepley
".....	G. Heusinkveld.....	R. M. Shea
".....	W. C. Finnoff.....	Maurice Katzman
".....	J. A. Philpott.....	J. M. Foster, Jr.
".....	H. S. Finney.....	W. M. Bane
".....	C. F. Kemper.....	C. E. Cooper
".....	J. M. Shields.....	E. J. Perkins
".....	H. G. Garwood.....	W. A. Sedwick
".....	J. S. Bouslog.....	J. R. Jaeger
".....	E. G. Faber.....	R. G. Packard
".....	C. H. Darrow.....	H. W. Snyder
".....	W. B. Yegge.....	L. V. Sams
".....	W. R. Waggener.....	V. E. Sells
".....	O. S. Fowler.....	J. G. Ryan
El Paso.....	D. A. Vanderhoof.....	L. R. Allen
".....	M. O. Shivers.....	L. S. Miller
".....	J. A. Sevier.....	F. O. Kettlekamp
".....	E. B. Liddle.....	J. T. Williams
Fremont.....	R. E. Holmes.....	R. C. Adkinson
Garfield.....	R. B. Porter.....	W. R. Tubbs
Huerfano.....	J. M. Lamme.....	W. S. Chapman
Kit Carson.....	W. L. McBride.....	C. J. Keller
Lake.....	F. N. Cochems.....	A. J. Bender
Larimer.....	W. B. Hardesty.....	T. C. Taylor
".....	C. H. Platz.....	John Gasser
Las Animas.....	D. D. Costigan.....	James G. Espey
Mesa.....	G. C. Cary.....	E. H. Peterson
Montrose.....	Isalah Knott.....	F. G. Didrickson
Morgan.....	Ira J. Clark.....	C. F. Eakins
Northeast.....	J. E. Naugle.....	J. W. Kinzie
Northwestern.....	A. C. Sudan.....	F. E. Willett
Otero.....	B. B. Blotz.....	R. M. Fulwider
".....	R. S. Johnston.....	
Prowers.....	L. E. Likes.....	F. E. Casburn
Pueblo.....	H. T. Low.....	J. D. Geissinger

<i>Society</i>	<i>Delegate</i>	<i>Alternate</i>
Pueblo.....	R. C. Robe.....	J. S. Norman
".....	G. M. Myers.....	G. E. Rice
San Juan.....	A. L. Burnett.....	
San Luis Valley.....	O. P. Shippey.....	C. A. Davlin
Weld.....	W. P. Allen.....	Burgett Woodcock
".....	O. E. Bennell.....	W. A. Schoen

Your Committee is ready to act upon any question of credentials which may arise during this session.

Respectfully submitted,
LORENZ W. FRANK, Chairman,
W. A. CAMPBELL,
HAROLD T. LOW.

Dr. Frank: "There is a change since the report was written. Dr. John R. Espey was elected alternate delegate for Las Animas county. Dr. Costigan, delegate, is away and cannot attend the meeting.

"Dr. A. L. Burnett of the San Juan Society, being a Councillor, is ineligible as a delegate."

President Stephenson: "The Executive Secretary will call the roll from the report of the Committee on Credentials."

The Executive Secretary then called the roll from the report of the Committee on Credentials and announced thirty-three accredited delegates present. The President announced a quorum.

"I will entertain a motion that the report of the Credentials Committee be adopted or rejected.

Dr. Garwood moved adoption of the report; the motion was seconded and carried.

President Stephenson: "The House is now organized and ready for business. Mr. Sethman will either read the minutes of the last annual meeting or some motion to dispense with the reading and accept them as they were published will be made."

Dr. Bortree: "I move that the minutes be approved as printed in the December, 1932, issue of Colorado Medicine."

The motion was seconded and carried.

President Stephenson: "What will be your disposition of the minutes of the special meeting of the House of Delegates which was called in Denver?"

Dr. Garwood: "I move that the minutes as published in the April, 1933, issue of Colorado Medicine be adopted as printed."

The motion was seconded and carried.

President Stephenson: "I have no special report to make. On behalf of the Society, as your President who is about to retire, I think that I will allow the reports of my committees and of the officers to serve as any record of the actions of the Society that I might have to offer. I believe that I have no suggestions further than the policies that have already been instituted in our organization."

The President announced the appointment of Reference Committees for the duration of the session as follows:

Reference Committee on Reports of Officers: A. C. McClanahan, Chairman; M. O. Shivers, J. M. Shields.

Reference Committee on Reports of Committees: Lanning E. Likes, chairman; G. E. Cheley, R. S. Johnston.

Reference Committee on Miscellaneous Business: G. Heusinkveld, chairman; J. A. Philpott, John Andrew.

Reference Committee on Audits and Appropriations: John S. Bouslog, chairman; H. T. Low, D. A. Vanderhoof, L. W. Bortree, ex-officio.

Dr. L. W. Frank then presented the report of

the Board of Trustees as printed in the Handbook, as follows:

REPORT OF THE BOARD OF TRUSTEES

To the House of Delegates of the Colorado State Medical Society:

The Board of Trustees held five called meetings during the year and on two other occasions conferred by telephone and took emergency actions which were later confirmed in meeting.

Two meetings in October, 1932, were devoted primarily to the setting up of budget and other financial plans for the year according to the instructions of the House of Delegates, and to the confirmation of new committee appointments.

At the December meeting the Board undertook the first drastic reductions in the budget when it began to appear that the Society's income for the year would not come up to expectations. Among the economies effected at this meeting was that in rent of office space. The Board authorized a three-year lease, with a two-year cancellation clause, for the present space in the Republic Building, which, though it provides larger quarters than heretofore, will save the Society \$360.00 per year.

At a meeting in February the Board received a committee from the Board of Trustees of the Medical Society of the City and County of Denver in joint discussion of the financial condition of the Society. The Denver Trustees submitted a list of recommendations for reduction in State Society expenditures, some of which had already been put into effect and others of which were met so far as your State Society Trustees felt was wise. At this meeting the Board confirmed a general salary reduction that had been made by the Executive Secretary on January 1, 1933, and put into effect a further reduction. Also at this meeting the system of payment to the State Society of dues collected by the Denver Society was altered.

On March 8, by long distance telephone, the Trustees agreed to extend from March 5 to May 1 the date when 1933 dues should become delinquent, the Trustees feeling that the banking holiday just proclaimed justified them in using their emergency authority in this manner. In their statement announcing this action to the secretaries of county societies, the Trustees asked all county societies to take like action. Again on May 2, the Trustees ordered that no members be suspended for non-payment of dues until further action could be taken, though all dues not paid to county societies by May 1 should be considered as delinquent. Both these actions were confirmed at the meeting held September 1, 1933, at which time the date for suspension of members for non-payment of 1933 dues was set for September 10, 1933.

At the final meeting of the year, the Executive Secretary was directed, subject to approval of the American Medical Association, to place the Society's office and journal under the provisions of the N. R. A. The Board voted to recommend passage of the constitutional amendment submitted last year to increase the number of councillor districts from five to nine, and instructed the Executive Secretary to prepare an amendment to the By-Laws for submission to this House, in case the constitutional amendment is adopted, to place the new plan in operation. The Board voted to recommend against passage of the proposed constitutional amendment which would allow the Past Presidents to elect some of their number to membership in the House of Delegates. In lieu of this amendment, your Board recom-

mends that the House, by resolution, adopt a standing rule granting the privilege of the floor, without vote, to all Past Presidents.

At the September meeting the Board approved action of the Denver Society in accepting short-term promissory notes from members for the payment of 1933 dues, and voted to cooperate with the Denver Society in maintaining such members in good standing. The Board adopted for recommendation to this House a budget submitted by the Treasurer and Executive Secretary for the fiscal year of 1933-1934, and approved annual financial reports of these officers. The Board also voted approval of a final draft of a benevolence fund plan drawn up by the Woman's Auxiliary, whereby the Auxiliary will establish a benevolence fund for the relief of financial distress among wives and widows of physicians.

The Board regrets that it was necessary to draw upon reserve funds of the Society during the year. Though the original budget for the year was \$3,000.00 lower than expenditures for the preceding year, receipts fell off suddenly in the winter months even more than had been predicted. Economies which the Board and the Executive Secretary instituted in December, January, and February could not be retroactive and therefore do not reveal their full effect in reports for the fiscal year just closed, but, continuing in force, they should assure a balanced budget for the new year. In addition, new advertising contracts recently signed apparently promise an increase in receipts for the coming fall and winter.

Respectfully submitted,
BOARD OF TRUSTEES,
By LORENZ W. FRANK,
Constitutional Secretary.

SUPPLEMENT TO THE REPORT OF THE
BOARD OF TRUSTEES

Constitutional Amendments

The Board of Trustees recommends adoption of the following two Constitutional amendments, which were regularly proposed at the Sixty-second Annual Session:

Amend Article VIII entitled "Officers," Section 1, by striking the word "five" in the last line of said section and inserting in lieu thereof the word "nine."

Amend Section 2 of the said Article VIII by striking the word "five" in the fourth line of said section and inserting in lieu thereof the word "three."

The Board of Trustees recommends against adoption of the following constitutional amendment, which was regularly proposed at the Sixty-second Annual Session:

Amend Article V entitled "House of Delegates," by inserting after the word "societies" in the fourth line of said Article the words "and by the Past Presidents."

SUPPLEMENT TO THE REPORT OF THE
BOARD OF TRUSTEES

Budget for the Fiscal Year of 1933-1934

RECEIPTS—

Dues, resident	\$ 9,500.00
Dues, non-resident	100.00
Space Rentals	225.00
Interest	300.00
Publications	8,500.00
TOTAL RECEIPTS	\$18,625.00

DISBURSEMENTS—

General Fund:	
Salaries	\$3,570.00
Rent	240.00
Telephone & Telegraph	200.00
Taxes	65.00
Insurance	20.00
Audits & Bonds	160.00
Travel	500.00
Mailing & Supplies	400.00
Permanent Equipment00
Scientific Work & Exhibits	200.00
House of Delegates	200.00
Guests & Entertainment	100.00
	\$ 5,655.00
Publication Fund:	
Salaries	\$3,042.00
Printing & Mailing	6,200.00
Supplies & Promotion	300.00
Advertising Commissions	1,500.00
Collection Expense	200.00
	\$11,242.00
Medical Defense Fund:	
	20.00
Library Fund:	
	500.00
Education Fund:	
Salaries	\$ 800.00
Committee on Public Policy	200.00
	\$ 1,000.00
TOTAL DISBURSEMENTS	\$18,417.00
BUDGET SURPLUS	208.00
	\$18,625.00

President Stephenson: "Gentlemen, it is my purpose to refer all reports to the appropriate committees for consideration, but at the same time I want the House to feel free to discuss these reports at the time they are presented. That will serve two purposes,—an opportunity to discuss the report and an opportunity for the members of each Committee to sound out the feeling of the House of Delegates before they act on these reports. It must be remembered, also, that when reports are returned by the Reference Committees you will again have an opportunity to discuss the reports.

"What is your pleasure with regard to the report of the Board of Trustees? Is there any discussion? If not, it will be referred to the Committee on Reports of Officers.

"I will ask Dr. George D. Andrews of Walsenburg to present the report of the Board of Councilors."

REPORT OF THE COUNCIL

To the House of Delegates of the Colorado State Medical Society:
Matters of importance brought to the attention of the Council for the year just closing were fewer than for the previous year.
The most important was an appeal from a decision of the Las Animas County Medical Society involving unethical procedure in the submission

of x-ray films to the Committee on Medical Defense of the Colorado State Medical Society by one of its members. The matter was heard before the full membership of the Council at the Congress Hotel, Pueblo, June 3, 1933, with action taken and decision rendered deemed best for the interests of medical organization.

Another complaint was against a Pueblo hospital and its staff concerning publicity given by an article in the Pueblo Chieftain of December 21, 1932. The Pueblo County Medical Society was informed that the Judicial Council of the American Medical Association had established a precedent in regard to contracts like the one in the present publicity.

The Council is pleased to report the lessening of complaints coming before it, and the courteous expressions during its work for the past year.

Respectfully submitted,

GEORGE D. ANDREWS, Chairman.

Dr. Andrews: "The report of the Council, as you note, is printed in the Handbook. You will notice that this year there were fewer complaints brought before the Council than in the previous year. Also that there seemed to be a more helpful spirit over the district in which I presided and which was a battleground for the last two years as far as the major problems of ethical conduct were concerned.

"I have not made, as I should have done, a visitation to each constituent society on account of the distance which I'd have had to cover, from Oklahoma to the top of Pike's Peak and from Kansas to New Mexico."

President Stephenson: "The delegates will please bear that in mind when we consider an amendment that will come up later for reorganization of our Councillor Districts."

Dr. Andrews: "A district which is one hundred and fifty miles long and about ninety miles wide is impossible to cover. Another thing is the expense involved in making these visits.

"Instead of making visits myself, I insisted on each constituent society taking up each matter individually, not passing it on to the Councillors. The correspondence which I received was indicative of cooperation.

"I can assure you that the Councillors, in rendering opinions or decisions, entered into the work without personal prejudice, their only objective being the protection of the profession on the basic principles of ethics.

"Jenner wrote, 'Never believe what a patient tells you what his doctor has said'. A remark casting discredit on a member of the profession does not increase respect of the critic unless the criticism is of a constructive nature and in a spirit of appreciation. We find that many incidents leading up to censure are instigated by members of the profession who, giving undue cognizance to the propaganda of the laity, lead into the maelstrom of unethical procedure—religion, politics and personalities in many instances at the head of the procession—and when the laity obtain the whip, the profession becomes the goat; and on approaching the mud hole in the lane of difficulties, many climb the fence instead of standing in solid formation.

"In the constituent societies which I have contacted I have observed a lack of information, or rather understanding, regarding their duties. I suggest that at stated meetings a profitable half hour could be occupied in the reading and discussion of by-laws and matters relative to the

State and National organizations with which they affiliate.

"When duty is poorly comprehended, efficiency is retarded, tending toward lethargy and indifference with poor attendance, and decline of interest assumes prominence.

"To the individual members of the Council, to the conscientious and efficient Executive Secretary and to Dr. W. W. King of the Public Policy Committee for constructive and well-timed advice, I tender my appreciation, as also to the generous spirit of helpfulness of all contacted during this, my last year as Councillor."

The President referred the above reports to the Committee on Reports of Officers.

President Stephenson: "I will call upon the Constitutional Secretary, Dr. Frank, to present his report."

REPORT OF THE CONSTITUTIONAL SECRETARY

To the House of Delegates of the Colorado State Medical Society:

During the past year the Constitutional Secretary has acted entirely in an advisory capacity, advising the Executive Secretary upon professional and ethical matters.

Respectfully submitted,

LORENZ W. FRANK.

Dr. Frank: "I have no report, further than that printed in the Handbook."

The President referred the report to the Committee on Reports of Officers.

President Stephenson: "I will ask for the report of the Executive Secretary."

Mr. Sethman: "Since mine is one of the more lengthy reports in the Handbook, I will not read it in full but will try to amplify one or two points.

"Truly this has been a year of great committee activity, the greatest I believe that the Society has ever seen; and if it is proper for me to make such a suggestion, I think the House of Delegates owes a particular vote of thanks to the committees this year.

"The figure in the report calling attention to the fact that I attended one hundred and eight called meetings of State Society committees this year compared with thirty-four the previous year tells the story about as well as anything. In addition there were five meetings of the Board of Trustees and a meeting of the Council, and several informal conferences with members of the Council.

"Dr. Rees will undoubtedly report in detail concerning the mid-winter postgraduate clinics. I do not wish to dwell on this except to emphasize the opportunity that this gave us for a mid-winter conference of County Society Presidents and Secretaries. It was the first time that we have held such a meeting. This was held during the clinic session as a formal meeting. Dr. Stephenson presided. Four or five papers were read and valuable round table discussions were had concerning the preparation of County Society programs, the relationship of County Society officers to the State Society committees, and so on.

"I sincerely hope that that can be continued because I think it welds the County Societies closer together so that Denver understands Pueblo's problems and Grand Junction understands Fort Collins' problems."

REPORT OF THE EXECUTIVE SECRETARY

To the House of Delegates of the Colorado State Medical Society:

The medical profession all over the country has had its most trying year in several generations, economically, politically and socially. It would seem to follow that medical organization should have met disaster, but in our state at least such was not the case. The Colorado State Medical Society has progressed definitely in many important endeavors; while it has suffered a few setbacks in other lines, they are neither crippling nor permanent and in all probability will in the future be found to have taught valuable lessons.

The year's greatest accomplishment, in the opinion of your Executive Secretary, was the stimulation of committees into activities bettering conditions of practice for the individual physician. True, this is at present a rather intangible accomplishment, whose effects are felt not all at once but over a period of years. Much of the work done has been of an extremely confidential nature, especially that by the Committee on Medical Defense, by the Advisory Committee, and by the Councillors. It is unfortunate that the best work of the Medical Defense Committee cannot be revealed even in informal discussion. However, this Committee's work has saved many members of the Society thousands of dollars and countless hours of mental anguish.

An indication of the year's increase in committee work is the fact that your Executive Secretary attended and kept the records of 108 called meetings of State Society committees, compared with thirty-four the previous year. This was exclusive of meetings of the Board of Trustees and the Council and the many informal conferences with chairmen and members of the committees. During the legislative session it was not uncommon for the Executive Office's committee room to be the scene of three meetings a day: noon, late afternoon and evening.

The Midwinter Postgraduate Clinics, inaugurated last January, proved to be an outstanding success. Registration fees more than retired the cost of the undertaking. Your Executive Secretary believes this type of educational service to members should be continued and expanded. The Clinics provided an opportunity to summon a midwinter conference of county society presidents and secretaries. This was well attended and should, if continued, prove valuable in coordinating county society activities over the state.

Other major accomplishments through state committees include:

Improved relations with the School of Medicine and its Teaching Hospitals and promulgation of definite recommendations for future policies.

Completion of an economic survey of medical practice in Colorado.

Prevention of establishment in this state of unethical contract plans that are rife in other parts of the country.

Establishment of a plan for cooperation with Dental Societies in the study of malpractice.

Establishment of a definite program for postgraduate education on cancer.

The respective Committee Reports give the details of this work.

In addition to attending meetings and assisting the committees and officers as mentioned above, your Executive Secretary has attended thirty-two meetings of constituent societies, on twenty-one of these occasions taking speakers to give scientific programs to the societies. Including these occasions, he supplied approximately fifty scien-

tific speakers for county society programs. He also attended the Annual Session of the American Medical Association and the Annual Conference of State Medical Society Secretaries and Journal Editors. He assisted a number of physicians in obtaining new locations, and endeavored throughout the year to be of personal service to all members of the Society whenever called upon.

In the winter months a survey of publication costs was made. Then new bids were sought on the publication of Colorado Medicine, under authority of the Publication Committee. The result was a 15 per cent reduction in printing costs beginning in March. A contract at the new rate has been signed with the Western Newspaper Union, running to December, 1934. A reduction in mailing costs was effected at about the same time by establishing hand delivery of Colorado Medicine in Denver through a messenger service.

Your Executive Secretary considers that the Society suffered three setbacks during the year. These were the passage of some legislation which the Society opposed, the necessity of drawing upon the Society's surplus funds to the extent of approximately \$1,400.00 to meet even a drastically reduced expense budget, and the loss of seventy-two, or 7 per cent, in membership.

Unfortunately the Society failed to present a united front to the legislature in support of the program drawn by the Committee on Public Policy, in spite of the fact that the program had been approved by this House of Delegates at its Special Session. Widely divergent opinions expressed by members of the Society to legislators confused them as to the real wishes of the medical profession. Cultists took advantage of this division in the ranks of the Society and stood solidly together. The result, as amplified in the Report of the Committee on Public Policy, was the passage of the chiropractic bill and the defeat of several bills sponsored by the Society.

Concerning the reduction of surplus funds: Your Executive Secretary and the officers of the Society failed to foresee early enough the drop in advertising revenue which occurred in the winter months, although we started the fiscal year with a budget \$3,300.00 lower than expenditures for the previous twelve months. Economies instituted at the beginning of the calendar year, as reported by the Treasurer and Board of Trustees, and later the reductions effected in printing and mailing costs, brought total expenditures for the fiscal year some \$5,500.00 below the previous year. Could these later economies have been put into effect last September, the Society could have added slightly to its surplus instead of making withdrawals. As it is, the calendar year of 1933 is well balanced, and our new fiscal year should show distinct improvement, especially since the trend in advertising business seems to be again upward. Difficulties attendant upon selling advertising in a period of business depression have several times within the year been increased by some of the Society's own members, who through carelessness or disinterest have advised commercial firms against using space in Colorado Medicine.

The loss in membership, which happily is a much smaller loss than was suffered by most state medical societies this year, is due in part to well-understood financial conditions and in part to what your Executive Secretary believes has been for several years the greatest failure of his office. That failure is the lack of information going out from the State Society to county societies and directly to members, concerning State Society activities. It is gratifying to note the

enthusiasm for organization progress and the support of the State Society and its officers by all who have served on committees, on the Board of Trustees, or Council. But the general membership of the Society cannot be as closely associated with Society work as are such men, and, as mentioned before, many important accomplishments of the Society are intangible and are felt by the members only indirectly. Even such a matter as the saving of \$7.50 a year for each member who carries liability insurance seems to be known to but few. These things are reiterated frequently in Colorado Medicine, but with a journal so large, many members read only a few articles each month and ignore the organization news. Some inexpensive method of bulletinizing the members is needed whereby the constant work in their behalf by officers and committees can be more directly explained.

Your Executive Secretary respectfully offers to this House the following suggestions for improvement of organization work during the coming year:

In the spirit of Section 2, Chapter IX of the By-Laws, direct the Council to act as a membership committee for the State Society, each Councillor assisting the constituent societies in his district to obtain the membership of all eligible physicians. The problems which the Society must face and solve in the near future make the strengthening of its membership the prime point of the year's program.

Each constituent society should adopt a definite program, suitable to its local conditions, for education of the laity, particularly the political leaders, in favor of a Basic Science Law. These programs can be coordinated through the Councillors and the Public Policy Committee.

Establish a policy of staggering the appointments to both special and standing committees, to prevent programs of work from coming to a standstill for one or more months at the time of each Annual Session.

Direct the Library to issue a monthly bulletin to county secretaries, to be read before each constituent society, announcing the new books and periodicals received, thus encouraging greater use of the Library.

Issue a letter bulletin at least twice during the year to every member of the Society, outlining what is being done by officers and committees, and reiterating the services the Society offers to members upon request, to increase membership and strengthen its cohesion.

To the above recommendations, your Executive Secretary respectfully requests and urges that every Delegate read every committee report published in the 1933 Handbook. Without the vigorous work of these men and the constitutional officers, no progress could have been made.

Without in the least undervaluing the services rendered by others, your Executive Secretary wishes to close by paying especial tribute to the members of the Committees on Public Policy, Medical Defense, Medical Economics, and the Advisory Committee to the School of Medicine, for self-sacrificing devotion to their tasks such as he has not seen equalled or approached in previous years.

Respectfully submitted,

HARVEY T. SETHMAN.

SUPPLEMENT TO THE REPORT OF THE EXECUTIVE SECRETARY MEMBERSHIP

Active membership on Aug. 31, 1933:

Resident paid	961
Non-resident paid	23

Deaths of members paid for 1933	984
	5

Active members, Aug. 31, 1933	979
Active members, Aug. 31, 1932	1,051
Active members, Aug. 31, 1933	979

Loss during year	72
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Analysis of change in active membership:

Died	13
Resigned	4
Transferred out of state	15
Elected associate members	6
Delinquent in dues payments	69

Gross losses	107
New members, paid	35

Net loss	72
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Analysis of associate membership:

Associate members, Aug. 31, 1932	37
Additions by election	6

Deaths of associate members	43
	2

Associate members, Aug. 31, 1933	41
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Analysis of honorary membership:

Honorary members, Aug. 31, 1932	7
Changes during year	0

Honorary members, Aug. 31, 1933	7
Total members, all classes, Aug. 31, 1932	1,095
Total members, all classes, Aug. 31, 1933	1,027

Loss during year	68
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SUPPLEMENT TO THE REPORT OF THE EXECUTIVE SECRETARY

Cash Report for the Fiscal Year of Sept. 1, 1932, to Aug. 31, 1933

RECEIPTS—

Dues, resident	\$ 9,540.65
Dues, non-resident	115.00
Space rentals	198.00
Interest and securities	400.20
Premium on bond sold	49.95
Publications	8,117.90
Miscellaneous	180.89

REMITTED TO TREASURER \$18,602.59

DISBURSEMENTS—

General Fund:

Salaries	\$ 3,904.19
Rent	481.68
Telephone and telegraph	220.30
Taxes	56.46
Insurance	11.90
Audits, bonds and bank charges	177.68
Travel expense	513.87
Mailing and supplies	345.40
Permanent equipment	96.05
Scientific work and exhibits	355.79
House of Delegates	213.38
Guests and entertainment	262.50

Total General Fund

Publication Fund:

Salaries	\$ 3,187.50
Printing and mailing	6,182.86
Supplies and promotion	288.21
Commissions	1,776.45
Collection expense	209.43

Total Publication Fund

Medical Defense Fund	8.25
Library Fund	500.16

Education Fund:

Salaries	\$ 800.00
Public Policy Committee	401.66

Total Education Fund

VOUCHERS ISSUED \$19,393.72

SUPPLEMENT TO THE REPORT OF THE
EXECUTIVE SECRETARY
Financial Report for Colorado Medicine, on Be-
half of the Committee on Publication
Income

Subscriptions, paid and receivable	\$ 2,285.13
Single copy sales	13.48
Advertising earned, paid and receivable	8,109.08
Cuts and miscellaneous, paid and receivable	185.59
Total Earnings	\$10,593.28
Expenses	
Salaries	\$ 3,187.50
Printing and mailing	6,182.86
Supplies and promotion	288.21
Commissions	1,776.45
Collection expenses	159.43
	*\$11,594.45
Deductions:	
Commissions paid on next year's advertising contracts	\$699.28
General Society expense charged to Colorado Medicine	270.00 969.28
TOTAL EXPENSES	\$10,625.17
LOSS FOR YEAR	31.89
	\$10,593.28

Supplement to the Report of the Executive
Secretary

CERTIFICATE

The Colorado State Medical Society:
We have audited the accounts and records of The Colorado State Medical Society for the year ended August 31, 1933.
The financial records kept by the Executive Secretary and the Treasurer of the Society were found to be correct, and
WE HEREBY CERTIFY, that, in our opinion, the accompanying Balance Sheet and Summary of Income and Surplus correctly exhibit, respectively, the financial condition of the Society at August 31, 1933, and the results of its operation for the year ended that date.

HARTSFIELD & PEABODY,
Certified Public Accountants.

Denver, Colorado, September 5, 1933.

THE COLORADO STATE MEDICAL SOCIETY
(Incorporated in Colorado)

Balance Sheet, August 31, 1933

Assets	
Cash in Banks	\$ 2,942.17
Investment in Bonds at Face Value	6,500.00
(Market Value \$5,587.35)	
Accounts receivable	\$ 7,397.52
Less reserve for doubtful accounts	700.00 6,697.52
Furniture and Fixtures	\$ 1,866.92
Less reserve for depreciation	653.88
	1,213.04
Advances to Salesman (Commission on September Advertising Contracts)	45.00
Total	\$17,397.73
Liabilities	
Unearned portion of advertising contracts	\$ 3,995.88
Surplus, per Exhibit "B"	13,401.85
Total	\$17,397.73

EXHIBIT "A"

*This figure will be found to differ from the total of Colorado Medicine expenses in the condensed report of the Certified Public Accountants by \$1,049.93, the total of accounts receivable written off this year but chargeable to prior years.

THE COLORADO STATE MEDICAL SOCIETY
Summary of Income and Surplus for the Year
Ended August 31, 1933

INCOME:	
Dues, Interest, etc.	\$ 8,655.92
Colorado Medicine	10,593.28
Total Income	\$19,249.20
EXPENSES:	
General	\$ 8,453.17
*Colorado Medicine	12,644.38
Total Expenses	\$21,097.55
Net loss for the year	\$ 1,848.35
Surplus at beginning of year	15,450.20
Gross Surplus	\$13,601.85
Surplus charge—addition to reserve for bad debts	200.00
Surplus at end of year	\$13,401.85

EXHIBIT "B"

SUPPLEMENT TO THE REPORT OF THE
EXECUTIVE SECRETARY

The Board of Trustees has instructed your Executive Secretary to prepare tentative By-Law amendments to put into operation the new system of councillor districts and the new terms of office of Councillors, in case the constitutional amendments proposed a year ago should be adopted at this session. The following are therefore respectfully submitted:

Amend Section 1 of Chapter IX of the By-Laws, entitled "Councillors," by rewriting the first sentence thereof to read as follows:

The Councillors shall be selected with a view to representing all parts of the State, and to this end the House of Delegates shall divide the State into nine Councillor districts.

Amend Section 3 of said Chapter IX by striking out the entire section and inserting in lieu thereof the following:

Section 3. Subject to resolution of the House of Delegates ordering a redistricting of the State, the counties composing the Councillor districts shall be arranged as follows:

District No. 1.—Logan, Sedgwick, Phillips, Morgan, Washington and Yuma.

District No. 2.—Boulder, Larimer, and Weld.

District No. 3.—Denver, Adams, Arapahoe, Douglas, Elbert, Jefferson, Clear Creek, and Gilpin.

District No. 4.—Lincoln, Kit Carson, Cheyenne, Crowley, Kiowa, Otero, Bent, Prowers, and Baca.

District No. 5.—El Paso, Teller, Fremont, Custer, Pueblo, Huerfano, and Las Animas.

District No. 6.—Chaffee, Lake, Park, Gunnison, Hinsdale, Saguache, Mineral, Rio Grande, Alamosa, Conejos, and Costilla.

District No. 7.—San Miguel, Dolores, San Juan, Montezuma, La Plata, and Archuleta.

District No. 8.—Mesa, Delta, Montrose, and Ouray.

District No. 9.—Moffat, Routt, Jackson, Grand, Rio Blanco, Garfield, Eagle, Pitkin, and Summit.

Amend said Chapter IX by adding a fourth section thereto, to read as follows:

Section 4. At the Annual Session at which amendments are adopted establishing nine

*The expenses of Colorado Medicine include the write off of accounts receivable in the amount of \$1,049.93, which were considered uncollectible. Practically all of these accounts represented prior years' business.

as the membership of the Council, three Councilors shall be elected for terms of one year each, three for terms of two years each, and three for terms of three years each, election thereafter being for three years or, in case of a vacancy, for the unexpired term, to carry out the spirit and intent of Article VIII of the Constitution.

The President referred the reports to the Reference Committee on Reports of Officers.

Dr. L. W. Bortree then presented the report of the Treasurer, as follows:

REPORT OF THE TREASURER

To the House of Delegates of the Colorado State Medical Society:

Attached hereto is the Annual Report of the Treasurer for the fiscal year 1932-33.

At the beginning of the fiscal year, we had on hand the sum of \$10,606. Feeling that the worst of the depression was over, we did not reduce the Budget figures sufficiently for the year, anticipating receipts of \$22,100, whereas the actual receipts amounted to \$18,600, a decrease of \$3,500. In January, the Trustees felt that, owing to the diminishing receipts, a drastic change in the Budget was necessary. Salary reductions and all possible economies were at once instituted, which, in the six months period, reduced the disbursements from the General Fund by over \$1,000; in the Publication Fund almost \$1,300. This was partially offset by an increase of \$200 over the Budget in the legislative work of the Public Policy Committee. The total net reduction over the Budget figures for expenditures was \$2,108.40, which leaves us an indicated deficit for the year of \$1,391.13. This figure is partially offset by checks already in the mail but not received at the time of compiling this Annual Report of nearly \$300. However, we might as well state that we have a \$1,400 deficit for the year. Had our economies been started at the time of the Annual Meeting instead of at the middle of the year, we should have been well within the budgetary figures. Commendation is to be extended to the Executive Office for the care used in reducing the expenditures for the second half of the fiscal year.

The disbursements, as indicated, of \$21,517 are higher than the actual disbursements by the sum of \$1,560, which was merely a ledger entry owing to the sale of bonds and was balanced by a receipt of the same sum. Also by the sum of \$23.75 caused by the re-deposit of a coupon which had been primarily returned.

Under the general financial condition of the country, it seems that the past year's experience of the Colorado State Medical Society in a financial way is not discouraging, and we trust that the coming year may prove less disastrous to the Society and to the members individually.

Respectfully submitted,

L. W. BORTREE, Treasurer.

SUPPLEMENT TO THE REPORT OF THE TREASURER

Balance on hand September 1, 1932-----\$10,606.00

RECEIPTS

Dues, resident -----	\$ 9,540.65
Dues, non-resident -----	115.00
Space rentals -----	198.00
Interest and Securities -----	1,974.15
Miscellaneous -----	180.89
Publications -----	8,117.90
Total Receipts -----	\$20,126.59
Total -----	\$30,732.59

DISBURSEMENTS

General Fund -----	\$ 8,163.20
Publication Fund -----	11,644.45
Medical Defense Fund -----	8.25
Library Fund -----	500.16
Education Fund -----	1,201.66
Total Disbursements -----	\$21,517.72
Balance on hand August 31, 1933 -----	\$ 9,214.87

STATUS OF INDIVIDUAL FUNDS

Medical Defense Fund:	
Balance Sept. 1, 1932 -----	\$ 461.45
Disbursements -----	8.25
Balance August 31, 1933 -----	\$ 453.20
Library Fund:	
Balance Sept. 1, 1932 -----	\$ 142.79
Appropriation -----	500.00
Total -----	\$ 642.79
Disbursements -----	500.16
Balance August 31, 1933 -----	\$ 142.63
Education Fund:	
Balance Sept. 1, 1932 -----	\$ 6,606.25
Disbursements -----	1,201.66
Balance August 31, 1933 -----	\$ 5,404.59
Publication Fund:	
Balance Sept. 1, 1932 -----	\$.00
Appropriation, Subscriptions -----	1,954.00
Receipts -----	8,117.90
Total -----	\$10,071.90
Disbursements -----	11,644.45
Deficit -----	\$ 1,572.55
General Fund:	
Balance Sept. 1, 1932 -----	\$ 3,395.51
Receipts -----	10,054.69
Total -----	\$13,450.20
Disbursements -----	\$ 8,163.20
Total -----	\$ 5,287.00
Appropriated to other funds -----	500.00
Total -----	\$ 4,787.00
Deficit Publication Fund -----	1,572.55
Balance August 31, 1933 -----	\$ 3,214.45

DISTRIBUTION OF LIQUID ASSETS BY FUNDS

Medical Defense Fund -----	\$ 453.20
Library Fund -----	142.63
Education Fund -----	5,404.59
General Fund -----	3,214.45
Total -----	\$ 9,214.87

LOCATION OF LIQUID ASSETS

Bonds, par value -----	\$ 6,500.00
Savings Account -----	1,555.47
Checking Account -----	129.05
Checks not deposited -----	1,030.35
Total -----	\$ 9,214.87

The report was referred by the President to the Reference Committee on Audits and Appropriations.

Dr. Crum Epler then presented the report of the Delegates to the American Medical Association, as follows:

REPORT OF THE SENIOR DELEGATE TO THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION, MILWAUKEE, 1933

The Meeting of the American Medical Association in Milwaukee showed evidence of the national depression in its attendance. In spite of the fact that this meeting was held within easy distance of a large medical population, the registration was considerably reduced.

Colorado was very well represented, there being forty-four registered; both of your representatives were present.

The working of the House of Delegates takes up all the time of one who represents his constituent society except a portion of one day, therefore, the Delegate cannot comment upon the scientific program as he has no opportunity to judge it.

It might be of interest to you to know that all business in the House of Delegates, except that which is discussed in executive session, is handled by committees, and if one desires to discuss any of the subject matter he will have to appear when the particular committee is in session. When these committee reports come before the House they have attached thereto a recommendation that they be adopted. These committee reports are all printed and will not be discussed in this report as they are available to all interested.

There were quite a number of matters that came up in executive session under new business.

1. The stomatologists requested that they be recognized and be given a section in the Association. This was referred to Committee.

2. The subject of standards for specialists was discussed at considerable length and finally referred to its proper committee.

3. The occupational therapists also were brought under the critical eye of the Association.

4. The unscrupulous and vicious radio-advertising was not left unnoticed.

5. The election and apportionment of state delegates, which compose this body, was brought up.

6. The discussion of states recognizing cults and the comparative standards which this recognition gave them was discussed. Some desired to abolish all State Boards that had to do with medical practice and cults.

7. The Navy entered into the present-day economic situation, but at the same time desired the medical profession to rejoice with them in the hopes that their beds were kept full.

8. A considerable discussion arose over the capabilities of members of hospital staffs, and it was felt staffs should be selected with more care particularly where there were training-schools associated with them.

9. The veteran's affair came up again for discussion, but, inasmuch as the action taken by our President in removing the privilege of Government Hospitals to non-service connected men, this matter was laid on the table.

10. The olden, time-worn subject of birth-control was again presented, and at this time it was brought up with the suggestion that the American Medical Association in secret determine the efficacy of the various contraceptives which were being sold throughout the country by druggists and lay peddlers. This subject immediately encountered a snag, as it has always done before, and was laid on the table.

11. The subject of radiologists and pathologists who are doing work by contract secured its share of discussion and resulted in about the same conclusion as other discussions on contract practice have always resulted in, namely, it being referred to a committee.

12. A plea was made that the organized profession demand of all medical schools that a course be provided in medical economics and business; this too was referred to a committee.

A resolution was presented requesting that the American Medical Association appeal to Congress and the "powers that be" for proper housing of the Army library, which is one of the largest and most valuable libraries in the world today. The reason for this request was that the building that houses it now is being razed and the library is

not being properly cared for. This resolution was adopted.

There was not much of importance, as you see, that came before the house in executive session. This was partly due to two things; one was that the veteran's matters were being settled by government edict, and the other one was that beer had come into existence, that the regulations relative to the prescription liquor loosened and everyone felt that the eighteenth amendment would soon be abolished, therefore, those two important things were not subjects for contention.

The election of officers was next and in part a little exciting. The president-elect chosen from three candidates resulted in the election of Dr. Walter L. Bierring of Des Moines, Iowa. Dr. John H. Musser of New Orleans was chosen vice president. The secretary and general manager resulted in the election of our distinguished guest, Dr. Olin West, who succeeded himself. Dr. Fred C. Warnshuis, the Speaker of the House, succeeded himself without opposition. Dr. Herman Kretschmer of Chicago was elected treasurer. There were two trustees to elect and lively politics were indulged in to the end that Dr. Austin Hayden of Chicago and Dr. Charles B. Wright of Minneapolis were elected.

The place of meeting selected was Cleveland, Ohio, Washington, D. C., and Atlantic City each being formidable candidates; time of meeting, June 11-15, 1934.

CRUM EPLER.

Dr. Garwood: "May I ask if there was anything brought up regarding the price of the Journal—whether the Journal is to be reduced in price or not?"

Dr. Epler: "It was not."

Dr. Garwood: "Why not?"

Dr. Epler: "They say it's cheap enough now."

Dr. Garwood: "I don't think so."

The report was referred by the President to the Committee on Reports of Officers.

President Stephenson: "Dr. Webb evidently has a retiring disposition; he has taken the farthest-back seat that he could possibly get. I'd like to ask a rising salute to our incoming President."

Such honor was shown Dr. Webb by the House.

"Dr. Webb, would you like to say something to the delegates?"

Dr. Webb: "I don't think I have anything at this moment, Dr. Stephenson, except to thank you all very greatly from the bottom of my heart, for my nomination and election to the presidency."

The report of the Committee on Scientific Work was then presented, as follows:

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

To the House of Delegates of the Colorado State Medical Society:

The General Program as published in pamphlet form represents the finished work of your Committee. Excellent roentgenological and scientific exhibits have been assembled by sub-committees under the chairmanship of Dr. W. F. Drea and Dr. C. E. Harris respectively. A decided innovation in the arrangement of the meetings on the first day is offered for trial.

Guest speakers were secured by the Colorado Neurological Society and the Rocky Mountain Orthopedic Club, to whom our appreciation is hereby extended.

No difficulty in obtaining contributions to the program from members of the Society was encountered. More papers were offered than could

be utilized. In some instances it has been necessary to make one discussion period cover several papers not necessarily closely connected in subject. No papers on tuberculosis have been included in the regular program. However, the Colorado Tuberculosis Association is sponsoring a program on this subject for Thursday evening. We have tried to make a representative program from the material available.

The Executive Secretary has been of immense assistance to this Committee.

Respectfully submitted,

G. BURTON GILBERT, Chairman,
C. S. BLUEMEL,
JAMES J. WARING.

Dr. Stephenson: "I would like to express my personal appreciation of the character of the program that has been prepared. On behalf of Dr. Webb, whose committee this really is, I want to express the appreciation of the Society to the Committee."

The report was referred to the Reference Committee on Reports of Committees.

The report of the Committee on Arrangements was next presented by Dr. Crouch as follows:

REPORT OF THE COMMITTEE ON ARRANGEMENTS

To the House of Delegates of the Colorado State Medical Society:

The Committee met on several occasions, and also had meetings with the President-elect, Dr. Webb, and the Secretary, Mr. Sethman. Following last year's custom the dates for the meeting were set for Thursday, Friday, and Saturday rather than in the middle of the week so that those who wish to enjoy a week-end in Colorado Springs may do so.

The entertainment for ladies has been very ably handled by Mrs. C. S. Morrison, and the golf tournament by Dr. H. W. Woodward, to both of whom the Committee wishes to express its thanks.

Arrangements have been made with the Antlers Hotel for headquarters, with the scientific programs in the little theater at the Municipal Auditorium, while the President's reception and banquet are to be held at the Broadmoor Hotel.

The Committee is very gratified in obtaining very moderate rates at the various hotels, which it believes will be an added incentive for an increased attendance.

Respectfully submitted,

JOHN B. CROUCH, Chairman,
J. B. HARTWELL,
THOMAS R. KNOWLES.

Dr. Crouch: "In addition to the report as printed in the Handbook, I'd like to add that with the cooperation of the President-elect and the Scientific Program Committee, the Committee has endeavored to keep the cost of the meeting as low as possible due to the present depression."

The report was referred by the President to the Reference Committee on Reports of Committees.

The report of the Committee on Public Policy was next presented, as follows:

REPORT OF THE COMMITTEE ON PUBLIC POLICY

To the House of Delegates of the Colorado State Medical Society:

Your Committee on Public Policy presents the following summarized report:

The Committee held thirty-two meetings dur-

ing the year, at all but one of which a quorum attended. Many informal conferences of members of the Committee were held in addition.

The Committee refers the House to its report submitted on March 11, 1933, to the Special Session of the House, as reporting the Committee's activities up to that time.

Since then the Committee met many times during the legislative session concerning pending proposed legislation, and did its best to prevent passage of adverse legislation and to promote the legislative policies approved by the House of Delegates.

The Committee regrets to report that House Bill No. 189, creating a separate Board of Chiropractic Examiners, was passed and signed by the Governor. Many members of our Society did not agree with the official action of the Society in opposing this measure, and knowledge of this fact reached legislators, which undoubtedly had its effect in passage of the bill. The Committee's work, both against this bill and against other cult-sponsored legislation, was greatly hampered by the fact that members of our Society, interested in certain workmen's compensation legislation which we disapproved, openly opposed our Society's policies and fraternized openly with Chiropractors during the legislative session in support of such legislation.

No other legislation detrimental to medicine was passed, and there was a plethora of such legislation introduced.

The persistent and active support of our Secretary, Mr. Sethman, and many of our loyal members was most effective assistance to your Committee.

The special session of the legislature passed nothing of particular interest to physicians, except to place a state tax on medicinal liquors, which was passed in lieu of a liquor license fee on drug stores.

Recommendations for the future:

General education of the public by the county societies in favor of a Basic Science Law, throughout the legislative interim.

Closer contact between officers of county societies and members and prospective members of the legislature, and local county politics.

Respectfully submitted,

W. W. KING, Chairman,
H. R. McKEEN, Vice Chairman,
EDWARD DELEHANTY,
GERRIT HEUSINKVELD,
A. L. BEAGHLER,
W. W. HARMER,
OSCAR D. GROSHART,
L. L. WARD,
A. C. HOLLAND,
FRANK B. STEPHENSON, Ex-officio,
LORENZ W. FRANK, Ex-officio,
MR. H. T. SETHMAN, Ex-officio,
By W. W. KING, Chairman.

Dr. King: "I want to emphasize the last paragraphs with reference to recommendations, particularly the words 'general education of the public by the county societies in favor of a basic science law.'"

"That is clean as a hound's tooth; it is fine; it is right, and for the benefit of the people in every particular. It is in keeping with modern types of legislation. If we do the right thing we are going to carry this campaign on, not as a legislative campaign, but that we want the people to know what this thing is, before legislators go down to the Capitol."

"This has got to be carried on locally, with the local Society and with the local organizations of women's clubs and things of that kind. If they understand what this thing really means, the community is going to be for it and then it doesn't matter whether Jones or Smith is elected, he knows that the people in the community are for the proposition.

"This is a thing about which no one need have any quibblings; it is clean in every particular.

"Dr. Kemper called my attention a few days ago to a matter which it seems is going to assume some proportion. It has some important features, though our committee has not been able to get a great deal of action on it yet.

"Under the Hitler regime in Germany, the exodus from Germany of a large number of doctors is inevitable. They all seem to select the United States as the place to go. Dr. Kemper personally talked with a man who was the physical examiner of these men, and he conceives this to be a vital problem.

"While the committee has taken this matter up, we have nothing definite to report. You can readily recognize that the only place you can get any action is with reference to the quota, the law bearing on the number of people who can come in from these foreign countries.

"This is a big thing, because the Jewish representation in the profession in Germany is large and the Hitler program is forcing them to leave Germany. The question is whether the quota is being violated.

"I was very glad when Dr. Kemper called my attention to it. I took the matter up with Washington and just had a telephone call a few moments ago stating that it is being investigated."

Dr. Epler: "Not to discuss the report but to comment upon the Hitler conduct with respect to the Jews: this matter was brought up in the American Medical Association meeting in Milwaukee and was discussed there at considerable length. It finally resulted in the profession in the United States going on record as not being in sympathy with the treatment that the Jewish people in Germany were receiving. That's about all there was to it."

Dr. Katzman: "I am Jewish and the whole German situation is something terrible to me. I don't believe we are going to get anywhere by trying to hold down the quota and prevent people from coming here in excessive numbers. I think we should invite the outstanding figures of the profession to come to the United States and lend the benefit of their knowledge to the medical profession of this country. We need progress.

"What should be done is to do everything in our power to cause Hitler and his associates to change their ideas and to keep the doctors and other good men who have done so much for Germany in that country and go on helping Germany."

The report was referred to the Reference Committee on Reports of Committees.

Dr. Stephenson: "I want to say that the brevity of Dr. King's report is not in any sense a measure of the tremendous amount of work that his Committee accomplished."

The President called on Dr. W. W. Wasson to

present the report of the Committee on Medical Defense, as follows:

REPORT OF THE COMMITTEE ON MEDICAL DEFENSE

To the House of Delegates of the Colorado State Medical Society:

Your Committee reports with regret that the number of suits and threatened suits for malpractice has increased decidedly throughout the year just closed. The brief tabulation below of cases handled by your Committee tells the story without further comment:

Cases pending Sept. 1, 1932.....	10
New cases reported during year.....	20
Total	30
Cases closed during year.....	12
Cases pending Aug. 31, 1933.....	18

Your Committee held nineteen meetings during the year in connection with these cases.

All members of the Society have by now been notified through Colorado Medicine of the increase in malpractice insurance premiums put into effect by one of the two companies with which our Society holds master policies. Your Committee cannot criticize insurance authorities for this action in view of the mounting losses which they incurred under the old premium rates. Membership in our Society saves a physician a minimum of \$7.50 a year in his malpractice insurance premium, so members of our Society still save most of their annual state medical society dues through the premium discounts granted under our master policies.

Through increasing care in the keeping of individual case histories, and through increasing care in our discussion with patients of treatment given by our colleagues, we physicians can, if we will, reduce the number of unjust malpractice suits and threats to a point where insurance premiums will again be lowered.

One year ago in its report to this House, your Committee made the following observation: "From the year's work, it is the conviction of the members of the Committee on Medical Defense that practically all suits for malpractice originate in the criticism, either intentional or inadvertent, of colleagues by some member of the profession." We repeat this observation, convinced that it was never truer than at the present time, and convinced that this carelessness on the part of our own Society members has brought about the increased cost of malpractice insurance.

Your Committee has within the year assisted the State and Denver Dental Associations in setting up a plan similar to our own for the study of malpractice cases involving dentists, and it is the hope of the committees from our related professions that both groups may find value in closer cooperation toward the prevention of unjust suits.

Respectfully submitted,
W. WALTER WASSON, Chairman,
T. D. CUNNINGHAM,
CASPER F. HEGNER.

The President referred the report to the Reference Committee on Reports of Committees.

The report of the Committee on Medical Edu-

cation and Hospitals was then presented, as follows:

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

To the President and House of Delegates of the Colorado State Medical Society:

Because of the illness of the Chairman during much of the past year, he has not called any meetings, and because no matters requiring action have been referred to this Committee, no meeting of the other two members has been held. Therefore, there is no action to be reported.

Respectfully submitted,

CHARLES N. MEADER, Chairman.
KENNETH D. A. ALLEN,
HERBERT A. BLACK,

The report was referred to the Reference Committee on Reports of Committees.

Next the President asked for a report of the Committee on Library and Medical Literature. Dr. Downing made the report as follows:

REPORT OF THE COMMITTEE ON LIBRARY AND MEDICAL LITERATURE

To the House of Delegates of the Colorado State Medical Society:

During the past year the Library has been run with its usual high efficiency. The librarian and her assistant are courteous and alert. The books are clean, kept in an orderly fashion, and obtainable without delay. There is an atmosphere of quietness and study about the surroundings which make the library an ideal place for reference work.

The demands on the library have been greatly increased in 1932 and 1933, both in the number of visitors and in the number of books and magazines borrowed.

We strongly recommend that the State Society continue its support to this feature of its activities, which is accessible to all its members.

On May 5, 1933, your Committee and this Society suffered a great loss in the passing of Dr. Carbon Gillaspie, whose friendly help and wise counsel we shall sorely miss in the future.

Attached are supplemental reports giving the statistics of the State Society's share of the Library for the past year.

Respectfully submitted,

E. D. DOWNING, Chairman,
F. W. KENNEY.

Supplement to Report of Committee on Library and Medical Literature

September 1, 1932, to September 1, 1933

Number of volumes in Library Sept. 1, 1932	2,202
Volumes received through Colorado Medicine, Sept. 1, 1932, to Sept. 1, 1933	81
Volumes purchased, Sept. 1, 1932, to Sept. 1, 1933	17
	2,300
Cost of volumes purchased	\$250.16
Maintenance appropriation	250.00
	\$500.16
Balance in reserve fund, Sept. 1, 1933	\$142.63
Total visitors residing outside Denver, Sept. 1, 1932, to Sept. 1, 1933	98
Shipments requested, Sept. 1, 1932, to Sept. 1, 1933	80
Items loaned, Sept. 1, 1932, to Sept. 1, 1933	239

Books Purchased for the Colorado State Medical Library

September 1, 1932, to September 1, 1933

- Coca, A. F.: Essentials of Immunology. Baltimore, Williams & Wilkins, 1925.
Cutting, R. A.: Principles of preoperative and postoperative treatment. N. Y., Hoeber, 1932.
Dictionary of American Biography. New York, Scribner, 1928. 11 v.
Hurst, A. F.: The Constitutional Factor in Disease. London, Kegan Paul, 1927.
Lewis, Thomas: The Blood Vessels of the Human Skin and their Responses. Chicago, Chicago Medical Book Co. 1927.
Noe, A. T.: Compendium of Physiotherapeutic Technique. A. T. Noe. 1930.
Porter, Langley and Carter, W. E.: Management of the Sick Infant. 4th ed. St. Louis, Mosby. 1932.

Books Received by Colorado Medicine for Review September 1, 1932, to September 1, 1933

- Adler, Francis H.: Clinical Physiology of the Eye. N. Y., MacMillan.
Allen, Edgar: Sex and Internal Secretions. Baltimore, Williams and Wilkins, 1932.
American College of Physicians: Transactions of the College of Physicians. Phila., 1932.
American College of Surgeons: Outline of the Treatment of Fractures. American College of Surgeons, 1933.
Bainbridge, W. S.: Report on Sixth International Congress of Military Medicine and Pharmacy. Washington, Supt. of Documents, 1933.
Balyeat, Ray M.: Egg, Wheat or Milk-Free Diets. Phila., Lippincott, 1930-1931.
Bartlett, F. H.: Infants and Children. N. Y., Farrar and Rinehart.
Beekman, Fenwick: Office Surgery. Phila., Lippincott.
Bland, P. B.: Practical Obstetrics. Phila., Davis, 1932.
Bourne, A. W. and L. H. Williams: Recent Advances in Obstetrics and Gynecology. Phila., P. Blackiston's Son, 1932.
Boyd, Wm.: Text Book of Pathology. Phila., Lea and Febiger, 1932.
Buckstein, Jacob: Functional Disorders of the Large Intestine and Their Treatment. N. Y., Harper Bros., 1932.
Cannon, Walter B.: The Wisdom of the Body. N. Y., Norton.
Cantarow, A.: Calcium Metabolism and Calcium Therapy. Phila., Lea and Febiger, 1933.
Clifford, Randall: The Sputum. Its Examination and Clinical Significance. N. Y., MacMillan, 1932.
Coulter, Stanley: Pharmacology of the Medicinal Agents in Common Use. Indianapolis, Eli Lilly and Co.
Crile, George: Diagnosis and Treatments of Diseases of the Thyroid Gland. Phila., Saunders, 1932.
DeLee, Joseph B.: The Principles and Practice of Obstetrics. Phila., Saunders, 1933.
Dooley, M. S.: Interns Handbook. Phila., Lippincott.
Dunlap, Knight: Habits. Their Making and Unmaking. N. Y., Lippincott, 1933.
Feinberg, S. M.: Asthma, Hay Fever and Related Disorders. Phila., Lea and Febiger, 1933.
Fishbein, Morris: Frontiers of Medicine. Baltimore, Williams and Wilkins, 1933.
Fisher, W. A.: Senile Cataract. Chicago, Chicago Eye, Ear, Nose and Throat Hospital.
Gershenfeld, Louis: Urine and Urinalysis. Phila., Lea and Febiger, 1933.
Geschickter, Chas. and M. M. Copeland: Tumors of the Bone. N. Y., American Journal of Cancer, 1931.
Goldberg, Benjamin: Procedures in Tuberculosis Control. Phila., Davis, 1933.
Hamman, Louis: International Clinics. Phila., Lippincott, 1933.
Hamman, Louis: International Clinics, Vol. 11. Phila., Lippincott, 1933.
Harris, Henry: California's Medical Story. San Francisco, Grabborn, 1932.
Hutton, Isabel E.: Sex Technique in Marriage. N. Y., Emerson.
Hyman, A. S. and A. E. Parsonnet: The Failing Heart of Middle Life. Phila., Davis, 1932.
Jarcho, Julius: The Pelvis in Obstetrics. N. Y., Hoeber, 1933.
Johannesohn, Fritz: Chininum. Amsterdam, 1932.
Kaiser, Albert D.: Children's Tonsils In or Out. Phila., Lippincott.
Koch, Robert: The Aetiology of Tuberculosis. N. Y., National Tuberculosis Association, 1932.
Latz, Leo J.: The Rhythm of Sterility and Fertility in Women. Chicago, Latz Foundation.

- Lewis, Sir Thomas: *Diseases of the Heart*. N. Y., MacMillan.
- Looney, W. W.: *Anatomy of the Brain and Spinal Cord*. Phila., Davis, 1932.
- Luria, A. R.: *The Nature of Human Conflicts*. N. Y., Liveright.
- Magnuson, Paul B.: *Fractures*. Phila., Lippincott.
- Mayer, Edgar: *The Curative Value of Light*. N. Y., Appleton, 1932.
- Mayo Clinic: *Collected Papers of the Mayo Clinic*. Vol. 23, 1931. Phila., Saunders, 1932.
- Mayo Clinic: *Collected Papers of the Mayo Clinic*. Vol. 24, 1932. Phila., Saunders, 1933.
- Mazer, Chas.: *Clinical Endocrinology of the Female*. Phila., Saunders.
- McDowall, R. J. S.: *The Science of Signs and Symptoms*. N. Y., Appleton.
- Medical Clinics of North America: Phila., Saunders, 1933.
- September, 1932. v. 16, no. 2.
- November, 1932. v. 16, no. 3.
- January, 1933. v. 16, no. 4.
- March, 1933. v. 16, no. 5.
- May, 1933. v. 16, no. 6.
- July, 1933. v. 17, no. 1.
- New York Academy of Medicine, Committee on Public Health Relations: *Outline of Preventive Medicine*, 2nd Ed. N. Y., Hoeber, 1932.
- New York Tuberculosis Association, Criteria Committee: *Criteria for the Classification and Diagnosis of Heart Disease*. N. Y., New York Tuberculosis Association, 1932.
- Piney, A.: *Diseases of the Blood*. Phila., Blackiston's Son, 1932.
- Pusey, W. A.: *The History of Dermatology*. Baltimore, Thomas, 1933.
- Pusey, W. A.: *The History and Epidemiology of Syphilis*. Baltimore, Thomas, 1933.
- Rankin, F. W., J. A. Bagen and L. A. Buie: *The Colon, Rectum and Anus*. Phila., Saunders, 1932.
- Robinson, W. J.: *The Law Against Abortion*. N. Y., Eugenics Publishing Co., 1933.
- Rothrock, J. L.: *Obstetrics and Gynecology*. N. Y., Hoeber, 1933.
- Rowe, A. W.: *Differential Diagnosis of Endocrine Disorders*. Baltimore, Williams and Wilkins, 1932.
- Rypins, Harold: *Medical State Board Examinations*. Phila., Lippincott.
- Schamberg, J. F. and C. S. Wright: *Treatment of Syphilis*. N. Y., Appleton.
- Stone, Eric: *Medicine Among the American Indians*. N. Y., Hoeber, 1932.
- Surgical Clinics of North America: Phila., Saunders, 1933.
- August, 1932.
- October, 1932.
- December, 1932.
- February, 1933.
- April, 1933.
- June, 1933.
- Sutton, R. L.: *Introduction to Dermatology*. St. Louis, Mosby, 1932.
- Swanberg, Harold: *Radiologic Maxims*. Quincy, Radiological Review Publishing Co., 1932.
- Tate, M. A. and A. M. Mendenhall: *Transactions of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons*. Minneapolis, Bruce, 1933.
- Timme, Walter: *Lectures on Endocrinology*. N. Y., Hoeber, 1932.
- White House Conference on Child Health and Protection. *Hospitals and Child Health*. N. Y., Century Co., 1932.
- Williams, Leonard: *Minor Maladies*. Baltimore, Wood, 1933.
- Wyatt, B. L.: *Chronic Arthritis and Fibrositis*. Baltimore, Wood, 1933.
- Year Book Publishers: *Practical Medicine Series*. Chicago, Year Book Publishers, 1931.
- Bassoe, Peter, Editor: *Neurology*.
- DeLee, Joseph B., Editor: *Obstetrics*.
- Fantus, Bernard, Editor: *General Therapeutics*.
- Graham, Everts A., Editor: *General Surgery*.
- Wise, Fred, Editor: *Dermatology and Syphilis*.

The report was referred by the President to the Reference Committee on Reports of Committees.

The President called for the report of the Committee on Cooperation with Allied Professions.

REPORT OF THE COMMITTEE ON COOPERATION WITH ALLIED PROFESSIONS

To the House of Delegates of the Colorado State Medical Society:

Only one call was made upon your Committee during the year, that being for the appointment

of a representative of this Society to address the annual convention of the Colorado Pharmacal Association. Your Committee appointed Dr. John R. Evans of Denver to this task, in which he acquitted himself to the honor of this Society and the pleasure of the inviting association.

Respectfully submitted,

HARRY S. FINNEY, Chairman,
GEORGE R. WARNER,
JOHN ANDREW.

The report was referred to the Reference Committee on Reports of Committees.

The report of the Committee on Medical Economics was presented by Dr. Claude E. Cooper, as follows:

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

To the House of Delegates and Officers, Colorado State Medical Society:

Your Committee on Medical Economics herewith submits its report.

There is no panacea of which we are aware to restore prosperity for the medical profession. It must work its way out of its present troubles, have vision enough to foresee something of the future and initiative enough to attempt a solution. Some will advocate radical ventures. Others will persist in ultra-conservatism. Some middle course is preferable.

Our objective should be to devise a plan of procedure and so arrange fees that all classes could receive efficient care and pay within their means.

A new trend of medical economic thought is to try out the application of the reciprocal obligation (insurance) principle to the conduct of medicine among the low income classes exclusively. The County Society being the smallest unit of our organization and the least complicated is chosen to undertake the actual experiment. The plan is for the entire County Society or at least 75 per cent of its members to offer the public on a voluntary non-profit basis various types of contracts providing medical care, for periodic payments by the individual. These must vary with local conditions.

One deterrent to the scheme is that the public will not buy. Persuasion of them to do so rests with the individuals (County Society members) offering the contract. Another deterrent is the new thinking involved. The profession is not accustomed to think actuarially, and this would be necessary: technical and legal considerations would be an integral part of any such undertaking. To your Committee, they appear to be reasonably simple, certainly not insurmountable.

In support of our recommendation that those county societies who are alert to their problems and have fortitude enough to attempt to better them, undertake offering their low income classes a reciprocal obligation contract, we offer the following statistical information. (1) 49.8 per cent of families have incomes under \$2000.00 a year; (2) 85.92 per cent of the 1918 population received under \$2000.00 a year. We cannot see in the view of modern living conditions how these people can, as individuals, pay for modern medicine to which they are entitled; but we do believe that the insurance principle applied to their health problem will enable them to do so.

The point at issue is not the insurance principle, but how to use it. We advocate the right of all the people to good medicine. We know that the majority cannot afford to pay for all of it. Then, what better recourse have we than insurance and taxation which we know are sound?

It will be inferred by some that such a contract constitutes a revolution in the conduct of medicine which is not desirable and for which no necessity exists. Your Committee wishes to emphasize that it is intended only for the low income classes and should in no way change the methods now in use for the minority of the population that now supports us. Present methods of practice are unquestionably the best for those able to pay their medical care costs.

We are not unmindful of the opposition of the A. M. A. to the general plan of insurance medicine, especially as operated by European governments or by corporations for profit; nor unmindful of the deteriorations accompanying contract practice regardless of how disguised. The plan referred to is not in the opposed classes because it does not restrict opportunity to practice, nor free choice of physician, is on a non-profit basis and under the control and management of the profession. This places the responsibility where it belongs. All of us have looked to the A. M. A. for help. Thus far we have been disappointed.

We are aware of the uncertainties and experimental nature of this method of practice. We think we are familiar enough with human nature to anticipate many dissatisfactions, controversies, and demands for preferred consideration that will surely arise. Yet we have witnessed a progressive decline in the average practice to such an extent that we feel that the risk of failure should not deter the experiment. We think it will be many years before national prosperity returns to a degree that will permit prosperous medicine as at present conducted, and therefore are in accord with trying this method.

In opposition to this insurance view, relief is looked for in the rapidly growing demand for a more equal distribution of wealth. Never again will our people permit the accumulation of great wealth and power in the hands of a few as in the past. Even if the N. R. A. fails its fundamental idea of shorter hours and more pay has been so thoroughly impressed on the minds of the public that no political party would dare exclude it from its platform. The future trend will be more money for the masses and less for the rich. If wages increase enough most people will be able to pay medical care costs. Time only can verify this prediction.

We believe that the profession shares in the recent more hopeful and optimistic attitude of the public toward the depression, and will choose to sit tight and muddle out of their difficulties somehow, rather than make an attempt to remedy them.

Prosperity lies in extending our contacts and services to a greater number of people, getting rid of the burden of free service to indigents, the encroachment of government school and private intrusions into remunerative curative medicine and readjusting our business attitudes and methods.

The return of prosperity is contingent upon many events, such as:

(a) Re-employment of the idle. Disemployment is a continuous process incident to the efficiency of machines.

(b) Payment of a medical care wage. For 20,000,000 or more that will probably never happen. For this class your Committee advocates an annual contract between the County Government and the County Medical Society such as the Iowa Plan. Detailed information can be secured from the Executive Secretary. Another 20,000,000 earn a wage that will permit payment of small fees

only. The Academy of Medicine in Cleveland is social servicing this class and determining the fee that should be charged. This is experimental. Those receiving wages in accord with the N. R. A. minimum wage scale would properly be included in this class. Fifteen dollars a week leaves but little for medical services after necessary expenditures. Where County Medical Societies offer their public a medical care contract, one for this class should be included providing for ordinary care, exclusive of surgery and consultative service. In instances where these are necessary, recourse could be had to the patient, or in deserving cases to Colorado General Hospital or municipally operated institutions. Next comes the large middle class comprising 50,000,000. Even during good times, serious illnesses, because of their costs, were commonly hardships. With them medical fees are in constant conflict with the costs of luxuries, social position, education, taxes, travel, etc. The result is, too often, the physician is only partially or never paid. This class could use and should be offered some plan of medical service based upon periodic payments such as the California, Milwaukee or any other in accord with the safeguards enunciated in the Minority Report of the Committee on the Costs of Medical Care (Medical Care for the American people), which are:

1. It must be under the control of the medical profession.
2. It must guarantee not only nominal, but actual free choice of physician.
3. It must include all, or a large majority of the members of the county medical society.
4. The funds must be administered on a non-profit basis.
5. It should provide for direct payment by the patient of a certain minimum amount, the common fund providing only that portion beyond the patient's means.
6. It should make adequate provision for community care of the indigent.
7. It must be entirely separate from any plan providing for cash benefits.
8. It must not require certification of disability by the physician treating the disease or injury.

It should also be approved by the Council of this Society before it is offered the public. Should prosperity or inflation overtake us before we are aware, it would be quickly discarded, but if prosperity lags behind, it may be of decided value.

(c) Resumption of buying.

(d) Re-education of the public to accept the idea that medical services have a value and must be paid for. This is a difficult, yet essential problem. We think that at least 60 per cent or more of delinquent accounts accumulated in the past three years will never be paid regardless of any method used for their collection. However, we are on our way out of the depression and now is the time to begin using better business methods, to tighten up on credits and let it be known that we expect as prompt payment for our services as anyone engaged in any other line of work. Agreement upon the fee involved before the service is rendered, satisfactory arrangements, in some instances in writing, for its payment and a firm stand by the physician after reaching a just fee, will do much to discourage the idea that any doctor is everybody's free refuge when ill. This is an individual problem and will have to be individually solved.

(e) Indigency. Some relief for the physician from this burden is necessary. The Iowa Plan is probably the best. The medical care of the indigent is more a social than professional one and our main interest is to convince society of this fact, to the end that the physician may be relieved of the free and exacting service that has heretofore been expected of him. In connection herewith the determination of indigency should be done by the physician or by medical social service under his control otherwise impositions are sure to creep in.

(f) It is useless to criticize the public for non-payment of fees when so many cannot do so. Obligations accumulated during the depression will consume surplus for a long time. It is certainly our duty to so set fees that the public can pay them. Your Committee does not advocate a reduction in the unit fee or gross income, as both are low enough, but we do advocate a trial by the profession through the County Society of offering the low income public a reciprocal obligation contract for one year which, if successful, would spread the risk from the individual to the many, and we anticipate, would produce for the physician an increased income.

(g) We feel that it is generally accepted that we are on our way into a modified democracy in which individual responsibility is in a great measure assumed by the government and individual freedom is restricted by government regimentation. If such is to prevail, cooperative plans for practice will conveniently fit into the system. Under such circumstances it seems inevitable that medicine will be in some manner governmentally regulated and the profession should direct its trend.

(h) That our industry is highly competitive because of a surplus of physicians is obvious. Your Committee advocates contacting senior high school students and freshmen college students through this Society's executive office with the purpose of informing them what the conditions of practice are and what to expect should they be contemplating it as a vocation.

(i) Your Committee deplores the indifference of the physician to his economic outlook. This is a vital question. Every physician should read *Medical Care for the American People*, *The Way of Health Insurance*, *The Business Side of Dentistry*, *How to Budget Health*, and the articles on medical economics in the *Journal and Bulletin*, A. M. A. It is only through informing ourselves that an acceptable solution of our problems is possible.

(j) In our thinking, full importance must be given the patients' viewpoint. For him the incidence of illness is not predictable, therefore he is disinclined in his spending habits, to provide for it. Luxuries have been accepted by the people and are here to stay. The injustice inferred in the oft repeated statement that patients buy and run a car but do not pay their medical bills has lost weight with the public. We should accept the situation as an adverse influence to collections and take other means than criticism to offset it. Until we know by actual trial, the theory of reciprocal obligation medicine is as good a means as we have at present.

(k) The difficulty of making a collection is often due to a lack of foresight of the physician. Too frequently in the interest of science, or of his own convenience, he advises costly hospitalization and consultative service to the end that he receives no payment. Your Committee feels that, except in major illnesses, an equal relationship exists between the ability to pay and the amount of service to be rendered. In the actual handling

of many cases a disproportion occurs and the patient receives an overabundance of service and the physician no payment whatever. Correction is obvious.

Public Institutions and Government Medicine. This hitherto unsolved problem will remain unsolved until such a time as their activities are confined strictly to the indigent and the organized profession permitted to have a voice in the management.

Colorado General Hospital should be made free. Similarly the State Board of Health except in the strictly epidemiological field should limit its activities to indigent cases.

An exhibit of a simple method of bookkeeping and aids to business will be found in the department of exhibits. The aim of bookkeeping should be to keep a complete concentrated, accurate and understandable record of financial dealings with your patients. Written memoranda, understandings or the results of discussions in the more complicated financial situations will do much to relieve a doubt of the accuracy of a monthly statement in the mind of your patient and at the same time refresh your own memory. An itemized statement is more readily acceptable by the patient than a lump sum one.

We trust this exhibit will be helpful to those interested.

An Analysis of the Incomes of Physicians in Colorado for the Period 1930 to 1933*

The 10 per cent return of the questionnaires sent out, permits an appreciable doubt of the accuracy which their compilation shows. Nevertheless in appreciation of the interest taken in the subject by those making returns and in the belief that they would show approximately correct averages, the compilation was made. In instances where just a few cards were returned, the averages should be discarded as probably inaccurate.

Owing to the great difference between high and low incomes in the Denver returns, they were divided into incomes above \$6000.00 and below \$6000.00. The point \$6000 being closest to the arithmetical point of division.

Comments. Table 1 and 3. Gross Income. The small decline in income in 1931 from that of 1930 shows the profession as a whole was quite prosperous. This appears to be contrary to opinions expressed by numerous individuals and may be due to the forty physicians out of 123 who reported increases in gross in 1931 and who were apparently among the young men. The year 1932 showed an average 25 per cent drop in gross. The estimates for 1933 are probably accurate as they seem to be verified by income received over an eight-month period.

Net income. Shows a greater percentage decline than gross which would be expected. Net Operating Expenses. Shows less decline than either gross or net income, meaning that operating expense could not be reduced proportionately to gross or net. Delinquent Accounts. Self-explanatory.

Colorado Rural based on ten returns shows an actual decrease in delinquent accounts. This is against the trend. Charity Work. No comment.

Table 2. The essence of this table lies in the last two columns.

Respectfully submitted,
C. E. COOPER,
PHILIP HILLKOWITZ.

(Continued on Page 483)

*See tables Nos. 1, 2, and 3, on Pages 479 to 482.

Supplement to the Report of the Committee on Medical Economics

TABLE II
AVERAGE GROSS INCOME, NET INCOME, AND DELINQUENT ACCOUNTS
OF PHYSICIANS IN COLORADO, 1930-1933

Location and Year	Average Gross Income	Average Net Income	Average Delin- quent Accounts	Ratio of Net Income to Gross Income	Ratio of Delin- quent accounts to Gross Income
Colorado Total—					
1930	\$9,040	\$5,780	\$3,310	63.9%	36.6%
1931	8,470	5,330	3,780	62.9	44.6
1932	6,750	3,910	4,430	57.9	65.6
1933 (est.)	5,590	3,040	4,430	54.4	79.2
Denver Total—					
1930	10,110	6,370	4,450	63.0	44.0
1931	9,550	6,030	5,100	63.2	53.4
1932	7,760	4,470	5,990	57.6	77.2
1933 (est.)	6,860	3,590	5,120	52.3	74.6
Colorado Cities Exclusive of Denver—					
1930	8,850	5,750	2,490	65.0	28.1
1931	8,390	4,920	3,040	58.6	36.2
1932	6,490	3,660	3,730	56.4	57.5
1933 (est.)	5,020	2,600	4,630	51.8	92.2
Colorado—Rural—					
1930	6,670	4,280	1,990	64.2	29.8
1931	5,840	3,860	1,730	66.1	29.6
1932	4,640	2,970	1,630	64.0	35.1
1933 (est.)	3,900	2,420	1,850	62.1	47.4
El Paso (City)—					
1930	8,510	5,470	3,390	64.3	39.8
1931	8,550	5,530	3,390	64.7	39.6
1932	7,310	4,580	4,230	62.7	57.9
1933 (est.)	6,440	4,130	4,380	64.1	68.0
Larimer (City)—					
1930	7,620	4,460	2,450	58.5	32.2
1931	7,040	3,820	2,860	54.3	40.6
1932	5,770	3,040	4,750	52.7	82.3
1933 (est.)	4,960	2,310	4,750	46.6	95.8
Mesa (City)—					
1930	4,370	2,880	700	65.9	16.0
1931	4,660	2,990	3,000	64.2	64.4
1932	3,890	2,210	3,500	56.8	90.0
1933 (est.)	2,550	1,290	3,850	50.6	151.0
Pueblo (City)—					
1930	8,290	5,850	690	70.6	8.3
1931	8,230	5,490	1,020	65.5	12.4
1932	6,800	4,110	1,330	60.4	19.6
1933 (est.)	4,970	2,970	1,330	59.8	26.8
Weld (City)—					
1930	5,450	2,910	1,000	53.4	18.3
1931	5,330	3,240	1,000	60.8	18.8
1932	4,600	2,680	1,200	58.3	26.1
1933 (est.)	3,900	2,100	1,500	53.8	38.5
Weld (Rural)—					
1930	6,230	3,930	-----	63.1	-----
1931	5,810	3,210	-----	55.2	-----
1932	5,180	2,880	-----	55.6	-----
1933 (est.)	4,210	2,180	-----	51.8	-----

AVERAGE INCOME, EXPENSE, DELINQUENT ACCOUNT

Location and Year	Gross Income			Net Income			Net Operating Expense			Delin No. of Cases
	No. of Cases	Actual	Per Cent of 1930	No. of Cases	Actual	Per Cent of 1930	No. of Cases	Actual	Per Cent of 1930	
Colorado Total—										
1920.....	123	\$9,040	100.0%	123	\$5,780	100.0%	123	\$3,260	100.0%	63
1931.....	123	8,470	93.7	123	5,330	92.2	123	3,140	96.3	63
1932.....	123	6,750	74.7	123	3,910	67.6	123	2,840	87.1	63
1933 (est.).....	92	5,590	61.8	86	3,040	52.6	92	2,550	78.2	42
Colorado cities exclusive of Denver—										
1930.....	44	8,850	100.0	44	5,750	100.0	44	3,100	100.0	24
1931.....	44	8,390	94.8	44	4,920	85.6	44	3,470	111.9	24
1932.....	44	6,490	73.3	44	3,660	63.7	44	2,830	91.3	24
1933 (est.).....	37	5,020	56.7	30	2,600	45.2	37	2,420	78.1	15
Colorado—Rural—										
1930.....	22	6,670	100.0	22	4,280	100.0	22	2,390	100.0	10
1931.....	22	5,840	87.6	22	3,860	90.2	22	1,980	82.8	10
1932.....	22	4,640	69.6	22	2,970	69.4	22	1,670	69.9	10
1933 (est.).....	18	3,900	58.5	18	2,420	56.5	18	1,480	61.9	9
El Paso (City)—										
1930.....	8	8,510	100.0	8	5,470	100.0	8	3,040	100.0	5
1931.....	8	8,550	100.5	8	5,530	101.1	8	3,020	99.3	5
1932.....	8	7,310	85.9	8	4,580	83.7	8	2,730	89.8	5
1933 (est.).....	7	6,440	75.7	7	4,130	75.5	7	2,310	76.0	4
Larimer (City)—										
1930.....	4	7,620	100.0	4	4,460	100.0	4	3,160	100.0	4
1931.....	4	7,040	92.4	4	3,820	85.7	4	3,220	101.9	4
1932.....	4	5,770	75.7	4	3,040	68.2	4	2,730	86.4	4
1933 (est.).....	2	4,960	65.1	1	2,310	51.8	2	2,650	83.9	1
Mesa (City)—										
1930.....	3	4,370	100.0	3	2,880	100.0	3	1,490	100.0	1
1931.....	3	4,660	106.6	3	2,990	103.8	3	1,670	112.1	1
1932.....	3	3,890	89.0	3	2,210	76.7	3	1,680	112.8	1
1933 (est.).....	2	2,550	58.4	2	1,290	44.8	2	1,260	84.6	1
Pueblo (City)—										
1930.....	9	8,290	100.0	9	5,850	100.0	9	2,440	100.0	2
1931.....	9	8,230	99.3	9	5,490	93.8	9	2,740	112.3	2
1932.....	9	6,800	82.0	9	4,110	70.3	9	2,690	110.2	2
1933 (est.).....	4	4,970	60.0	4	2,970	50.8	4	2,000	82.0	1
Weld (City)—										
1930.....	2	5,450	100.0	2	2,910	100.0	2	2,540	100.0	1
1931.....	2	5,330	97.8	2	3,240	111.3	2	2,090	82.3	1
1932.....	2	4,600	84.4	2	2,680	92.1	2	1,920	75.6	1
1933 (est.).....	2	3,900	71.6	2	2,100	72.2	2	1,800	70.9	1
Weld (Rural)—										
1930.....	4	6,230	100.0	4	3,936	100.0	4	2,300	100.0	0
1931.....	4	5,810	93.3	4	3,210	81.7	4	2,600	113.0	0
1932.....	4	5,180	83.1	4	2,880	73.3	4	2,300	100.0	0
1933 (est.).....	3	4,210	67.6	3	2,180	55.5	3	2,030	88.3	0

CHARITY WORK OF PHYSICIANS IN COLORADO, 1930-1933

Charity Work in Home or Office			Charity Work in Private Institutions			Charity Work in Public Institutions			Total Charity Work		
No. of Cases	Actual	Per Cent of 1930	No. of Cases	Actual	Per Cent of 1930	No. of Cases	Actual	Per Cent of 1930	No. of Cases	Actual	Per Cent of 1930
86	\$1,310	100.0%	59	\$ 700	100.0%	49	\$ 470	100.0%	32	\$2,610	100.0%
86	1,310	100.0	59	770	110.0	49	570	121.3	32	2,920	111.9
86	1,520	116.0	59	920	131.4	49	740	157.4	32	3,430	131.4
50	1,660	126.7	43	1,220	174.3	36	590	125.5	25	3,790	145.2
33	1,150	100.0	20	550	100.0	19	250	100.0	9	2,580	100.0
33	1,290	112.2	20	660	110.0	19	360	144.0	9	3,180	123.3
33	1,430	124.3	20	750	136.4	19	760	304.0	9	4,270	165.5
14	1,570	136.5	15	1,380	250.9	12	230	92.0	6	4,840	187.6
12	780	100.0	11	190	100.0	11	40	100.0	8	1,170	100.0
12	800	102.6	11	190	100.0	11	40	100.0	8	1,240	106.0
12	1,040	133.3	11	250	131.6	11	40	100.0	8	1,660	141.9
12	1,060	135.9	11	270	142.1	11	40	100.0	8	1,780	152.1
5	1,730	100.0	5	1,290	100.0	1	---	---	1	1,600	100.0
5	1,970	113.9	5	1,550	120.2	1	---	---	1	2,100	131.3
5	2,190	126.6	5	1,670	129.5	1	100	---	1	2,900	181.3
5	2,330	134.7	5	1,870	145.0	1	300	---	1	4,300	268.8
3	900	100.0	---	---	---	2	1,250	100.0	0	---	---
3	1,100	122.2	---	---	---	2	1,500	120.0	0	---	---
3	1,330	147.8	---	---	---	2	1,750	140.0	0	---	---
0	---	---	---	---	---	0	---	---	0	---	---
3	1,500	100.0	3	230	100.0	1	0	---	1	500	100.0
3	1,670	111.3	3	220	95.7	1	0	---	1	1,000	200.0
3	1,670	111.3	3	220	95.7	1	0	---	1	1,000	200.0
2	1,920	128.0	2	220	95.7	1	0	---	1	1,000	200.0
1	5,000	100.0	3	330	100.0	4	100	100.0	1	6,400	100.0
1	6,000	120.0	3	400	120.0	4	130	130.0	1	7,700	120.3
1	6,000	120.0	3	670	201.0	4	250	250.0	1	9,000	140.6
0	---	---	1	670	201.0	2	250	250.0	0	---	---
0	---	---	0	---	---	1	500	100.0	0	---	---
0	---	---	0	---	---	1	500	100.0	0	---	---
0	---	---	0	---	---	1	500	100.0	0	---	---
0	---	---	0	---	---	1	500	100.0	0	---	---
1	800	100.0	2	100	100.0	3	80	100.0	1	1,000	100.0
1	900	112.5	2	125	125.0	3	80	100.0	1	1,150	115.0
1	1,000	125.0	2	125	125.0	3	80	100.0	1	1,250	125.0
1	1,000	125.0	2	150	150.0	2	80	100.0	1	1,300	130.0

Supplement to the Report of the Committee on Medical Economics

TABLE III
AVERAGE INCOME, EXPENSES, DELINQUENT ACCOUNTS, AND CHARITY
WORK OF PHYSICIANS IN DENVER, 1930-1933

Year—	1930 Gross Income \$6,000 or More			1930 Gross Income Below \$6,000			All Incomes Combined		
	No. of Cases	Average Actual Income	Per Cent of 1930	No. of Cases	Average Actual Income	Per Cent of 1930	No. of Cases	Average Actual Income	Per Cent of 1930
Gross Income—									
1930	33	\$14,560	100.0%	24	\$3,980	100.0%	57	\$10,110	100.0%
1931	33	13,640	93.7	24	3,940	99.0	57	9,550	94.5
1932	33	10,860	74.6	24	3,500	87.9	57	7,760	76.8
1933 (est.)	26	9,680	66.5	17	3,030	76.1	43	6,860	67.9
Net Income—									
1930	33	9,410	100.0	24	2,560	100.0	57	6,370	100.0
1931	33	8,630	94.4	24	2,460	96.1	57	6,030	94.1
1932	33	6,230	68.2	24	2,040	79.7	57	4,470	69.8
1933 (est.)	23	4,990	54.6	15	1,730	67.6	38	3,590	56.0
Operating Expenses—									
1930	33	5,420	100.0	24	1,420	100.0	57	3,740	100.0
1931	33	5,010	92.4	24	1,480	104.2	57	3,520	94.1
1932	33	4,630	85.4	24	1,460	102.8	57	3,290	88.0
1933 (est.)	26	4,690	86.5	17	1,300	91.5	43	2,570	68.7
Delinquent Accounts—									
1930	18	6,520	100.0	11	1,060	100.0	29	4,450	100.0
1931	18	7,420	113.8	11	1,320	124.5	29	5,100	114.6
1932	18	8,670	133.0	11	1,610	151.9	29	5,990	134.6
1933 (est.)	12	7,310	112.1	6	1,730	163.2	18	5,120	115.1
Charity Work in Home or Office—									
1930	24	2,280	100.0	17	630	100.0	41	1,600	100.0
1931	24	2,020	88.6	17	700	111.1	41	1,470	91.9
1932	24	2,350	103.1	17	870	138.1	41	1,740	108.8
1933 (est.)	15	2,590	113.6	9	1,010	160.3	24	1,940	121.3
Charity Work in Private Institutions—									
1930	16	1,150	100.0	12	840	100.0	28	1,020	100.0
1931	16	1,210	105.2	12	900	107.1	28	1,080	105.9
1932	16	1,460	127.0	12	1,080	128.6	28	1,300	127.5
1933 (est.)	10	1,510	131.3	7	1,460	173.8	17	1,480	145.1
Charity Work in Public Institutions—									
1930	10	720	100.0	9	1,160	100.0	19	930	100.0
1931	10	860	119.4	9	1,330	114.7	19	1,080	116.1
1932	10	960	133.3	9	1,320	113.8	19	1,130	121.5
1933 (est.)	8	900	125.0	6	1,570	135.3	14	1,210	130.1
Total Charity Work—									
1930	9	3,490	100.0	6	3,230	100.0	15	3,390	100.0
1931	9	3,850	110.3	6	3,400	105.3	15	3,670	107.9
1932	9	3,990	114.3	6	3,720	115.2	15	3,880	114.1
1933 (est.)	6	3,960	113.5	5	4,670	144.6	11	4,300	126.5

COMPILATION OF QUESTIONNAIRE RETURNS

(University of Denver Research Bureau)

Total Cards Mailed	1025
Total Cards Returned	175
Total Cards Used	123

- 40 Physicians reported increases in gross income from 1930 to 1931.
- 18 Physicians reported increases in gross income from 1931 to 1932.
- 15 Physicians estimated increases in gross income from 1932 to 1933.
- 83 Physicians reported decreases in gross income from 1930 to 1931.
- 105 Physicians reported decreases in gross income from 1931 to 1932.
- 108 Physicians estimated decreases in gross income from 1932 to 1933.

COMMITTEE ON MEDICAL ECONOMICS

(Continued from Page 478)

REFERENCES

1. Medical Care for the American People, p. 16, Table 6.
2. Alexander Hamilton Peacock. Northwest Medicine, November, 1932.

Dr. Stephenson: "I should like to entertain a motion for a vote of thanks to Dr. Cooper's committee for the extreme amount of careful study that they have given to this subject and for the comprehensive report they have given us."

Dr. Harold T. Low so moved and it was seconded and carried.

Dr. Kemper: "Mr. President, I was a member of this Committee although my name did not appear as a signer of this report, and I would like to make a few remarks.

"It is easy for us all to bristle up and say, 'This is some more hooley.' That is what we did when industrial insurance came in, and we took what the State had to offer. That is what the physicians of England did and they took what Lloyd George had to offer. That is what the physicians in Germany did and they took what the political chicanery of Bismarck had to offer.

"Are we seeing this clearly? We are the only civilized nation in the world that has not succumbed to the popular sentiment in this matter. Can we guide it, or shall we drift? That is the question.

"If we could develop some system in our County Societies as Dr. Cooper has suggested in this report, whereby we could get some money for our charity, whereby we could stave off State Medicine, which seems to be coming on all sides, it might be a great thing for the doctors and it might be a good thing for the general public.

"I hope that no one thinks this Committee is rabid and is trying to bring about State Medicine. They are trying to prevent it. That is all this Committee is trying to do.

"I had the privilege of traveling in foreign countries this summer where State Medicine is full blown and I want to make a declaration before this House of Delegates that I hope to God it doesn't come here. It is bad for the doctor; it is bad for the public; it increases sickness; it increases expense, it does not add to the length of life or the prevention of sick days. It is bad in every respect, but it is the drift. Maybe we can take something less bad. Maybe we can take something a little poorer than individual practice of medicine such as our fathers have known, which has been so fine in America—take something a little less good, but something better than State Medicine.

"It seems to me that is the crux of this matter. We ought to be thinking about it and experimenting with it in some county of the State."

The President referred the report to the Reference Committee on Reports of Committees.

The Committee on Publication presented its report as printed in the Handbook, as follows:

REPORT OF THE COMMITTEE ON PUBLICATION

To the House of Delegates of the Colorado State Medical Society:

Colorado Medicine, the business enterprise of the Colorado State Medical Society, has felt the sting of the depression. The last twelve issues contain 154 fewer pages of advertising than the twelve issues preceding. With the shrinkage in advertising there has been a shrinkage in income, and consequently a decrease in the number of pages devoted to scientific papers. The scientific

sections of the last twelve issues contain 98 fewer pages than the preceding twelve issues. Unfortunately the smaller size of the journal has entailed delay in publication of some of the papers presented at the last annual meeting. Apologies are due to essayists who seemingly have been slighted because of this situation, and appreciation is hereby tendered for their forbearance.

The Committee on Publication wishes to extend its thanks to Dr. Douglas Macomber for his able editorship of Colorado Medicine, and to Mr. Harvey Sethman for his diligent attention to the business needs of the journal.

Below is appended a brief statistical report covering the last twelve issues of Colorado Medicine:

Pages, scientific section.....	502
Pages, advertising section.....	494

Total pages published.....	996
Original articles, Colorado section.....	46
Early diagnosis articles, Colorado section.....	4
Case reports, Colorado section.....	10
Original articles, Wyoming section.....	9
Original articles, Hospital section.....	9
Books received for review.....	81
Volumes of exchange journals received.....	72

The financial status of Colorado Medicine is covered in the separate report of the Executive Secretary.

Respectfully submitted,
C. F. KEMPER, Chairman,
C. S. BLUEMEL,
WILLIAM H. CRISP.

The report was referred to the Reference Committee on Reports of Committees.

The report of the Committee on Postgraduate Clinics was presented by Dr. Rees, as follows:

REPORT OF THE COMMITTEE ON POSTGRADUATE CLINICS

To the House of Delegates of the Colorado State Medical Society:

Your Postgraduate Clinics Committee wishes to report that in January of this year they conducted a three-day postgraduate clinic. This clinic was made possible through the cooperation of four hospitals in Denver, namely, The Children's Hospital, Colorado General Hospital, Denver General Hospital, and National Jewish Hospital.

Attendance by days was as follows:

January 18th	56
January 19th	67
January 20th	99

Fifty-three Colorado towns were represented.

Forty-eight Denver clinicians gave their services in connection with the clinics.

Your committee believes that the interest shown in the clinic was quite satisfactory, and the committee is of the opinion that increasing interest would be shown if the Society considered it advisable to continue the clinics in the coming years.

Respectfully submitted,
M. H. REES, Chairman,
O. M. GILBERT,
C. E. HARRIS,
NOLIE MUMBY,
G. E. CHELEY.

Dr. Rees: "The Committee is glad to report that the Clinic experiment was a success educationally and financially. There has been a good deal of comment as to how the Clinic should be continued and the type of Clinic which should be given. Dr. Harris felt that in the future we should attempt bedside clinics and ward walks in hospitals. I don't know how that would work out

unless it were divided up into very small sections, a large number of hospitals being used.

"The Committee feels that operative clinics should not be used except as we used them last year, namely: Have the private hospitals not giving the clinic invite small groups, very small groups, to observe operative clinics. The Committee feels that the clinic should be on patients, given in the various hospitals.

"Another question that arises is distributing these clinics over the State. Your Committee attempted to elicit some interest in towns other than Denver but we were not successful. One man in one town said, 'We are not working up our cases sufficiently to make them useful for clinics.'

"If that is true, it seems to me that a clinic in that town would be one of the most useful things that could occur there. It might be a good thing to have those clinics given in such places; they'd have to be hospital centers such as Colorado Springs or Pueblo or perhaps Grand Junction; they would have to be places where there would be hospital facilities available, where there would be a sufficient number of patients available to make the clinics of interest.

"Your Committee feels that this should be attempted next year and that there should be another committee appointed to carry on."

The report was referred by the President to the Reference Committee on Reports of Committees.

The report of the Committee on Workmen's Compensation Affairs was presented, as follows:

REPORT OF THE COMMITTEE ON WORKMEN'S COMPENSATION AFFAIRS

To the House of Delegates of the Colorado State Medical Society:

Your Committee met seven times during the year, most of the meetings being well attended.

Your Committee wishes to refer to its report read on March 11, 1933, before the special session of this House, as constituting a report of our major activities of the past year. In furtherance of the recommendations made in that report concerning pending legislation, members of this Committee assisted the Committee on Public Policy to the best of their abilities, and we are pleased to report that proposed legislation which this Committee and the Public Policy Committee opposed failed to pass.

After adjournment of the regular session of the legislature, this Committee planned to conduct conferences with the State Industrial Commission with a view toward better understanding between the Commission and practicing physicians, but officers of the Denver County Medical Society announced appointment of a Committee to carry out similar conferences and declined to refer such work to your State Committee; therefore our conferences were not held.

As announced a year ago, your Committee has held itself in readiness at any time to undertake adjustment of differences between individual physicians and the Industrial Commission. Only one such complaint was brought to the attention of the Committee and this was settled without Committee action.

Respectfully submitted,

A. S. CECCHINI, Chairman,
L. G. CROSBY,
W. R. WAGGENER,
J. D. CAREY,
LANNING E. LIKES,
D. H. O'ROURKE,
JOHN ANDREW.

The report was referred to the Reference Committee on Reports of Committees.

The President asked for the report of the Committee on Veterans' Legislation. It was offered as follows:

REPORT OF THE COMMITTEE ON VETERAN'S LEGISLATION

To the House of Delegates of the Colorado State Medical Society:

At the 1932 session of the Society certain resolutions proposed by the Committee, dealing with the subject of veteran's relief, were adopted by a practically unanimous vote. Copies of these resolutions were immediately dispatched to our representatives in Washington, to the officers of the American Medical Association and to others vitally interested in the controversial issue, many of these, particularly the Surgeons General of the Army and of the Public Health Service, expressing unqualified approval. It will be of interest to this legislative body to learn that the House of Delegates of the State Medical Society of New Mexico also adopted these resolutions in their entirety, and secured extensive cooperation within the sphere of its influence. It will be recalled that the chief concern of organized medicine at that time was centered in the proposed limitation of relief solely to those veterans suffering from disabilities directly connected with military service, and to the restriction of hospital construction and maintenance for this class alone. In fact this Society declared itself unalterably opposed to the extension of Federal hospital facilities of any sort, so long as adequate care could be readily supplied all worthy cases by our civilian institutions.

At the time these resolutions were adopted no one could have foreseen the sweeping changes in all governmental policies that were inaugurated under a political regime; the measures providing for a drastic reduction, particularly in all forms of expenditure for the relief of veterans and their dependents not only met the demands of organized medicine but furnished a just and equitable basis for the adjustment of problems which will inevitably arise in the administration of such a comprehensive enactment.

Your Committee, therefore, has only to report its continued interest and watchfulness in the rescinding of Federal laws in this field, which are inimical to the interests of our profession, and to express the hope that similar invasions of socialistic tendencies may be as happily nullified.

Respectfully submitted,

J. W. AMESSE, Chairman,
CRUM EPLER,
L. H. WINEMILLER,
L. V. SAMS,
E. B. LIDDLE.

The report was referred to the Reference Committee on Reports of Committees.

The report of the Advisory Committee to the School of Medicine was presented by Dr. Bouslog, as follows:

REPORT OF THE ADVISORY COMMITTEE TO THE SCHOOL OF MEDICINE

To the House of Delegates of the Colorado State Medical Society:

Your Committee met thirteen times during the year, its average attendance for the year being 93 per cent. In addition, a score or more of informal conferences have been held by members of the Committee with doctors and officials interested or concerned with the Committee's work.

At the last Annual Session this House referred to the Committee a list of complaints that had been previously filed with the Committee on Public Policy. These complaints were investigated with great care. A summary of the Committee's findings was published in the January, 1933, issue of Colorado Medicine, as follows:

Ever since the Annual Session at Estes Park last September, the Colorado State Medical Society's Advisory Committee to the School of Medicine and Hospitals has been hard at work studying the Colorado General and Colorado Psychopathic Hospitals' relations to the practicing medical profession, with a view toward bettering these relations. This work has involved a detailed investigation of the seven formal complaints registered against the institutions before the House of Delegates, which the House turned over to the Committee for disposal.

Until now, your Committee has withheld publication of any of its acts. Much of the work, both in and out of Committee meetings, has been of a confidential nature. Suggestions and advice which your committee issued to the Dean of the Medical School, and, through him to the Board of Regents of the University of Colorado, could not well be published until those advised could reply.

However, your Committee has been cognizant of an increasing misunderstanding between the practicing physicians on the one side, and the hospitals, their executives and their staffs on the other. For the latter reason, and, since within the last few weeks some definite results have accrued, the Committee's silence is broken.

As a result of actions taken by the Committee at its October 28, 1932, meeting, three important announcements can now be made:

First: On advice of the Committee, the Board of Regents has altered its rules concerning admissions to Colorado General Hospital so that in the future no patients will be admitted who are able to pay more than \$3.00 per day for their hospitalization and medical care. This eliminates the "\$5.00-per-day patients" entirely. A majority of your Committee feels that the hospital should admit charity cases only; but such a form of admission would require a change in the present law. The Regents have therefore done as much as they can under existing conditions.

Second: On advice of your Committee, the Board of Regents has voted to discontinue the employment of a publicity agent for the University of Colorado School of Medicine. This should eliminate all embarrassing publicity of individual doctors' names at the hospitals, to which the practicing profession has justly objected.

Third: At the request of Dr. Franklin G. Ebaugh, Director of the Colorado Psychopathic Hospital, the Committee has instituted measures which, it is hoped by all concerned, will largely if not entirely eliminate the personal publicity given to him and to other physicians connected with the hospital by the public press.

Practices which these three accomplishments hope to correct have, in the opinion of the Committee, been the primary factors in misunderstandings between the institutions and the physicians of the state. The Committee recognizes that these three are not the only "sore spots," and it has undertaken much additional work and many conferences with representatives of the hospitals and of the University toward correction of other faults.

It is proper, however, at this time to remind the physicians of Colorado that they themselves are the only ones who can correct many of the abuses that have been most severely criticized. Notable among these is the admitted fact that some patients obtain admission to Colorado General Hospital who are not in the indigent or semi-indigent classes which the hospital is intended to serve. There are only two ways in which these patients can gain admission; one by a certificate of a board of county commissioners, the other by a certificate from a regularly licensed physician. The Committee does not ask, nor should physicians expect, the hospital to maintain a state-wide social service investigative system capable of checking up on every applicant at his home. Such would be financially impracticable, if not wholly impossible.

To correct these abuses, physicians must unitedly refuse to approve county commissioners' certificates when the patient seeking admission is not indigent, and physicians must unitedly refrain from issuing their own certificates to such patients. Your Committee has found that it is a too frequent practice for a physician to wink at his patient's financial status and send him to Colorado General Hospital rather than to refer the patient to a colleague for consultation, or, in other cases,

send him to Colorado General Hospital rather than to do the necessary work at home for a reduced fee.

Physicians have the political strength, if they will but use it, to force their respective county commissioners to observe the law in respect to the indigency of patients sent to Colorado General Hospital. They have the facilities, through their county medical societies, for frank talk about any and all patients improperly sent to the institutions.

Your Committee again reminds all members that it is organized to serve the entire State Medical Society, to do what it can toward correcting abuses of the privileges offered by the teaching hospitals, to receive any and all complaints from members. The Committee welcomes these complaints, and members' suggestions; all will be thoroughly investigated and reported upon. Communications to the Committee may be addressed to any member of the Committee, or in care of the Executive Secretary of the Society, 537 Republic Building, Denver.

Prior to the special session of this House, held on March 11, 1933, your Committee prepared a second report, addressed to the Committee on Public Policy, in regard to legislative bills then pending in the General Assembly. Together with the report of the Public Policy Committee, the House adopted this second report, the principal points of which we again call to your attention, as follows:

1. The Committee advises that the Colorado General Hospital should be for indigent patients only. To accomplish this would require a change in our present laws. The Committee feels that it may be inadvisable to ask for such a change of law at the present legislative session, but the Public Policy Committee can decide the advisability of this act.

2. The Committee advises that the Colorado General Hospital and Medical School be not closed, providing the Board of Regents will recognize and consult the Colorado State Medical Society regarding the medical and hospital policies of these institutions. * * *

3. The Committee advises that all patients admitted to the Out-patient Department and Colorado General Hospital be required to sign an application similar to the enclosed form, with a penalty clause. * * *

4. We advise that, should the present law regarding admissions to the Hospital be not changed, the following law be repealed: Paragraph 2 of Section 6 of Chapter 186 of the Session Laws of Colorado, 1923, which reads as follows:

"What other cases may be admitted to the Hospital: Students of the University and such other patients as the Board of Regents, to an extent that will not interfere with the primary purpose of said hospital as set forth in Section 3 may direct, may be received in said hospital whenever there is room. The Board of Regents may always admit to the hospital such cases as they deem are emergency."

Members of this Committee joined hands with the members of the Committee on Public Policy in watching the progress of bills that had to do with the Medical School and in endeavoring to prevent passage of legislation detrimental to medical education and to our Society's expressed wishes.

Although none of the changes in law advised by your Committee were enacted at the last legislative session, we believe that considerable improvement in relations with these hospitals can be brought about in the legislative interim. As noted in the above special report, one of your Committee's principal recommendations to the School authorities has been that the prospective patient be required to answer and sign, before admission, a detailed questionnaire concerning his financial status, said questionnaire to carry a heavy penalty for falsification. Establishment of such a plan would, we believe, relieve the county commissioners and the physicians themselves of considerable embarrassment created by patients who bring political and other pressure to bear to force a doctor or commissioner to certify them for hospital admission. The Dean and Superintendent has agreed with your Committee that the

questionnaire plan would be very valuable, but he reports that restricted appropriations make it impossible at this time to put the plan into effect. Inasmuch as the Committee finds that a large proportion of the abuses of the Hospitals' privileges are traceable directly to improper certification of patients by members of our own State Society, we feel that some obligation rests upon the Society itself to aid in the prevention of these abuses. Therefore your Committee recommends that this House appropriate the sum of \$300.00 to print and distribute new admission forms and questionnaires for the above purposes. The Dean and Superintendent reports that this amount will be sufficient to put the plan into operation. There would be no additional expense to the Medical Society in maintaining the plan, once it is started.

As indicated in the preceding paragraph, your Committee's investigations have disclosed manifold abuses of the Colorado General Hospital privileges traceable to our own members. They also disclose an appalling unwillingness on the part of our own members to aid in correcting abuses that have been reported. Time and again we have investigated a complaint regarding the admission of an ineligible patient only to find that the Superintendent has a letter from another physician certifying the patient as eligible. Many unjust criticisms of the administrative officers of the Hospital have thus arisen, since the Superintendent is informed only by the admission papers or letters signed by the physician. The physician should be more specific in his letter to the Hospital asking admission for a patient than simply to say "Please admit Mr. or Mrs. X." Letters from the Superintendent of the Hospital, asking information about patients, have in the past been ignored by physicians. They should be answered promptly. Your Committee itself has been greatly handicapped in some of its investigations by the fact that members of our Society who have made verbal complaints ignore our letters asking for information. The physicians should keep in mind that Colorado General Hospital is a teaching institution. They should refer only those cases of teaching value. A few physicians try to send in patients for a single examination. The Dean states that such cases are refused as being of no teaching value.

Your Committee finds that county commissioners abuse the admission privileges only occasionally. The Superintendent reports that such abuse comes chiefly from the eastern part of the state, where it is often difficult to get a physician to examine the prospective patient without dangerous delay. Any physician knowing of abuse by a county commissioner should report the same at once to this Committee and to the officers of his county medical society. This Committee will promptly report its findings and actions.

Abuses by county commissioners cannot, in the opinion of your Committee, be corrected effectively by the Hospital administration or otherwise by correspondence out of Denver. Such abuses have been absolutely eliminated in several counties by vigorous actions of the respective county medical societies, and we feel that this may well be done over the entire state. We advise that the officers of county medical societies should confer frankly with their county commissioners concerning these problems, not once but frequently, and educate the commissioners as to the eventual public harm done by granting Hospital admissions as political favors.

A further means of discouraging abuses by both county commissioners and physicians is open. Your Committee is asking the Dean and Super-

intendent to provide the Committee monthly with a list of new and re-admitted patients, their addresses, and the names of the referring physicians or county commissioners. It is your Committee's plan to copy these lists by counties and mail such copies monthly from the Executive Office of the Society to each county and district medical society, to be read at the next ensuing meeting of that Society.

On May 23, 1933, your Committee addressed a letter to the Board of Regents of the University of Colorado advising (1) that Colorado General Hospital should be conducted for indigent patients only, (2) that the form of admitting patients be changed (as suggested previously in this report), (3) that full-time faculty members be not permitted to practice medicine privately for compensation, (4) that the Colorado Psychopathic Hospital should exercise greater care in the admission of patients, avoiding the acceptance of neurological cases and incurable psychiatric cases, and (5) that the promotion of friendly relationships between practicing physicians and the Hospitals would be aided by regular conferences between this Committee and the Board of Regents. The Committee was informed by the acting president of the University that these and other recommendations of your Committee would be acted upon after the return of President George Norlin. We feel that relations would also be improved by conference between the Advisory Committee and the Executive Faculty of the School at least twice a year. Such meetings with the Board of Regents and the Executive Faculty will have to come as a result of invitations from these bodies.

References have been made in this report to our advice for changes in the laws governing the teaching hospitals, and for establishing Colorado General as a hospital for indigent patients only. We believe that several changes in the present hospital laws are advisable. A careful study should be made over a considerable period of time, to include investigation of the situation in other states which have institutional set-ups similar to our own, especially in Wisconsin, Iowa, Nebraska, and Michigan. Much can be learned from studies that have already been made in those states, especially from a recent study which the Michigan State Medical Society completed at a cost to that Society of more than \$10,000.00. With such work, your Committee believes that simple and adequate amendments to the present hospital law can be prepared before the next regular session of the legislature. Toward the eventual goal of making Colorado General a hospital for indigents only, there must be a campaign of education of the public and its political leaders so that the legislature will appropriate sufficient funds to support the institution on that basis.

In summing up, your Committee finds that our members' relationships with the teaching hospitals have been impaired principally by the following:

1. Abuse of admission privileges by our own members.
2. Abuse of admission privileges by county commissioners.
3. Inadequate investigation of prospective patients by the hospital administration.
4. Private practice for compensation by faculty members supposedly on full-time salaries.
5. Former undesirable publicity of the institutions and their personnel.
6. Former acceptance of "full-pay" pa-

tients, able to pay \$5.00 per day for their hospitalization.
Including those suggestions amplified more fully in the body of this report, your Committee respectfully recommends to this House:

1. That it be a policy and goal of this Society to bring about establishment of Colorado General Hospital as a hospital for indigent patients only.
2. That it be a policy of this Society that staff and faculty members on full-time salaries at the Medical School and its teaching hospitals be not allowed to practice medicine privately for compensation.
3. That this year only, the House appropriate from our Society's Education Fund reserves the necessary funds, not to exceed \$300.00, to be used by the administration of the School of Medicine and Hospitals in establishing the penalty-questionnaire system of admissions as prepared jointly by the Advisory Committee and the Dean and Superintendent.
4. That the Executive Secretary of the Society be empowered and directed to circularize the county and district societies monthly with such lists of admitted patients and referring sources as are given to him by the authorities of Colorado General Hospital.
5. That it be a policy of this Society to insist against any re-establishment of a publicity department for the Medical School or its teaching hospitals.
6. That an Advisory Committee to the School of Medicine and Hospitals be continued for at least two more years, and be instructed to draft tentative amendments to the laws governing the teaching hospitals for presentation to this House at the next ensuing Annual Session.
7. That this House instruct the president and secretary of each county and district society to confer with their respective county commissioners and by friendly and frank conference to explain the dangerous ethical and economic precedents being established by political abuses of the privileges of the teaching hospitals.

In closing your Committee wishes to express its sincere thanks to Dr. Maurice H. Rees, Dean and Superintendent, for his untiring cooperation in this arduous work.

Respectfully submitted,

JOHN S. BOUSLOG, Chairman, Denver;
T. D. CUNNINGHAM, Denver;
CHARLES O. GIESE, Colorado Springs;
N. A. MADLER, Greeley;
C. E. SIDWELL, Longmont;
F. B. STEPHENSON, ex-Officio, Denver.

Dr. Rees: "Mr. Chairman, may I have the privilege of the floor?"

President Stephenson: "With the consent of the House. Shall we grant Dr. Rees the privilege of the floor?"

Consent was indicated by the House.

Dr. Rees: "The only comment I wish to make is to express in behalf of the Medical School and Hospital our keen appreciation of the wonderful work that this Committee has done during the past year. It has surprised me to see the way the men have come to the Committee meetings and taken part, and the many helpful suggestions which they have given us.

"In behalf of the School and the Hospital, we want to thank the Chairman and the members of this Committee.

"We are sorry that our extreme depletion of funds this year makes it impossible to carry out all of the recommendations which have been made. We are in a rather deplorable situation, financially, but we believe that in the future the medical profession will realize that if they help us out we can help them out, and that they cannot help themselves by going into the legislature and attempting to have our funds reduced or attempting to make us an annex to a Pueblo institution."

The report was referred by the President to the Reference Committee on Reports of Committees.

President Stephenson: "May I say at this time that so much work is being put upon this Reference Committee that I feel perhaps it should be enlarged, and I am going to make it a committee of five. We already have Dr. Likes, Dr. Cheley and Dr. Johnston. I will add the names of Dr. Rex Fuller of Salida and Dr. Claude E. Cooper of Denver so there will be five serving on the Reference Committee on Reports of Committees."

The report of the Committee on State Registration Fee was presented by Dr. Rogers, as follows:

REPORT OF THE COMMITTEE ON STATE REGISTRATION FEE

To the House of Delegates of the Colorado State Medical Society:

Your Committee respectfully refers this House to the report presented on March 11, 1933, to the Special Session of the House, and adopted as presented.

This Committee and the Committee on Public Policy endeavored to carry out the expressed wishes of the House and bring about the repeal of the State Registration Fee Law, but the legislature allowed the law to remain on the books.

Your Committee recommends renewed activity toward this repeal at the next regular session of the legislature.

Respectfully submitted,

R. W. ARNDT, Chairman,
T. E. BEYER,
F. E. ROGERS.

Dr. Rogers: "The full report of the Committee was made at the special meeting of the House of Delegates in March. It is published on page 159 of Colorado Medicine for April, 1933. We have at this time to add that the principal reason, apparently, for the annual registration fee being put through was to pay for legal expenses. The legal expense on the part of the Medical Board are now taken care of by the State's Attorney General. Last year the expense was over four thousand dollars to the legal department of the Board. This year and in the future, it will be taken care of by the Attorney General's office. The bill was not repealed as the Committee wished and recommended, and the House adopted the report.

"The Chairman of the Committee, when he made the report, mentioned the fact that this law had been submitted to some attorneys who had given the opinion that it was unconstitutional and that it could be successfully fought in the courts. The Chairman advised, then, that if the bill was not repealed the members of the profession refrain from paying their annual dues and there couldn't anything happen to them.

"The penalty under the law is that without any trial and without any consultation on the part of the offender who has not paid his dues, his license may be revoked. We believe that is unconstitutional."

The report was referred by the President to the Reference Committee on Reports of Committees.

The Executive Secretary announced that the Committee on Cancer was to hold a meeting during the afternoon and wished to defer its report until the evening session of the House. The report was accordingly deferred.

President Stephenson: "Gentlemen, that completes the reports of committees. What unfinished business is there on hand, Mr. Secretary?"

Mr. Sethman: "On the desk of the Secretary are three amendments to the Constitution of the Society which were submitted last year and, which therefore, come before this meeting as unfinished business. The amendments are in that 'Supplement to the Report of the Board of Trustees' wherein the Board of Trustees recommends the passage of two of the amendments and the rejection of the third." (See Page 466.)

Dr. Bortree: "Mr. President: Following the suggestion of the Board of Trustees, I move that we adopt the amendments to Article VIII, Sections 1 and 2, as printed, having to do with increasing the number of Councillors from five to nine and changing the method of election of same."

The motion was seconded by Dr. Barnard.

Dr. Garwood: "Does that refer to the number of Councillors?"

Dr. Bortree: "Yes. There seems to be some doubt in the minds of the members about this and I'd like to amplify it a bit.

"At the present time the State of Colorado is divided into five Councillor Districts, represented by one man each. It is the duty of the Councillor to visit each County Society in his district at least once a year; to act as arbitrator in cases of dissension in the County Societies, especially with regard to ethics, etc.

"It is physically impossible for one man to visit all the County Societies in his District in one year the way the Districts are arranged at the present time. By increasing the Districts from five to nine, it will be possible. The re-districting of the State will make it possible for a Councillor to do efficient work without too great a sacrifice. It ought to improve the status of the practice of medicine in the State of Colorado. We feel that it is a worth while change."

President Stephenson: "This does not change the function of the Councillors in any respect. It just enables them to do their work better. In answer to Dr. Garwood: the Councillors are to serve three years. Instead of serving five years, they are rotated so that they serve for three years only."

Dr. Garwood: "The motion referred only to the two recommended by the Board of Trustees and not the last one that was not recommended by the Board of Trustees."

Dr. Bortree: "Sections 1 and 2 of Article VIII."

Dr. Bortree's motion was carried, carrying adoption of the two sections of Article VIII referred to.

Dr. Stephenson: "What is the next order of unfinished business?"

Mr. Sethman: "Next is to act upon the proposed amendment which is carried in that same Supplemental Report of the Board of Trustees to amend Article V entitled 'House of Delegates.'"

"The amendment proposed last year would insert after the word 'societies' in the fourth line of the Article the words 'and by the Past Presidents.' The sentence would then read, 'It shall consist of delegates elected by the constituent

societies and by the past Presidents as in the by-laws hereinafter provided, and the President, Secretary and Treasurer.'"

Dr. Garwood moved support of the recommendation of the Board of Trustees; that this amendment be rejected.

Dr. Bortree: "Might I amplify this motion by stating our reasons for this recommendation?"

"We feel that advice from the past Presidents is extremely desirable. We feel, however, that electing members from the past Presidents to the floor would alter the representative character of this assemblage. A better solution of the problem would be to have, by resolution, the privilege of the floor for discussion granted to the former Presidents. We would therefore have the benefit of their experience without altering the representative character of the House of Delegates."

Dr. Garwood's motion carried.

President Stephenson: "New business is in order and the election of a Nominating Committee is the first order under that heading."

The following nominations were presented:

Dr. G. C. Cary, Mesa County.

Dr. H. R. McKeen, Denver County.

Dr. O. E. Bennell, Weld County.

Dr. J. A. Sevier, El Paso County.

Dr. H. T. Low, Pueblo County.

Dr. Garwood moved that the above Committee be elected by acclamation, there being no contest for election. Motion carried.

President Stephenson: "The Secretary has some new business to present."

Mr. Sethman: "In order to lay it officially before the House, I will call attention to that Supplement to the Report of the Executive Secretary (See Page 470), which consists of the amendments to the by-laws drawn by the Executive Secretary on instruction of the Board of Trustees to carry into effect the constitutional amendments which you have this morning adopted. I formally present them at this time, Mr. President. They can be acted upon a day later in this same annual session."

Dr. Low: "Mr. President: I move that a committee be appointed to draw up resolutions expressing the sympathy of this Society and our regret at the death of Mrs. Espey, wife of John R. Espey of Trinidad, a past President and present alternate Delegate and a past Delegate to the American Medical Association."

The motion was seconded and carried.

President Stephenson appointed on that committee Dr. Low, Chairman; Dr. McKeen and Dr. Darrow.

There being no further business to come before this session of the House of Delegates, it thereupon adjourned.

SECOND MEETING OF THE HOUSE OF DELEGATES

7:50 p. m., September 14, 1933

The meeting was called to order by President Webb, pursuant to adjournment.

The roll was called by the Executive Secretary, who announced a quorum.

Reading of minutes of the forenoon session of the House of Delegates was postponed to Saturday's meeting, September 16, by motion duly made and carried:

The President called for reports of Reference Committees. Dr. McClanahan read the report of the Committee on Reports of Officers, as follows:

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS

To the House of Delegates: Sept. 14, 1933.
Your Committee has the honor to report as follows concerning the reports of officers:

Report of the Board of Trustees

(a) We commend the drastic reductions in the budget reported by the Board of Trustees. Since the incomes of individual physicians have undergone a still more severe reduction, we recommend still further curtailments in the budget wherever that is possible.

(b) We approve the increase in the number of Councillor districts from five to nine.

(c) We commend the action taken in extending the privileges of the floor to Past Presidents during the sessions of the House of Delegates.

(d) We approve the recommendations of the Board of Trustees that Articles VIII and V be amended as noted in their report.

Report of the Council

We are gratified that so few matters of importance had to be brought to the attention of the Council during the past year.

Report of the Executive Secretary

We commend the efficient work of the Executive Secretary and his staff during the past year. We approve the recommendation that the idea of the Basic Science Law be popularized with the laity.

We suggest that the Library have published in Colorado Medicine a list of new books and periodicals received each month, in lieu of the Executive Secretary's suggested bulletin. The semi-annual bulletin suggested by the Executive Secretary could also be published in Colorado Medicine.

Report of the Treasurer

We approve the report of the Treasurer as rendered.

Report of the Delegates to the American Medical Association

We commend the diligence of our Delegates to the American Medical Association, realizing that their service to this Society was rendered at considerable personal inconvenience and sacrifice, and we approve their report.

Respectfully submitted,

A. C. McCLANAHAN, Chairman,
M. O. SHIVERS,
JAMES M. SHIELDS.

Dr. Fulwider moved acceptance of the report. Motion was seconded by Dr. Sevier and carried.

The report of the Reference Committee on Reports of Committees was read by Dr. Cheley, as follows:

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF COMMITTEES

To the House of Delegates: Sept. 14, 1933.

Your Committee has carefully considered all reports referred to it, and wishes to make the following comments and recommendations:

Your Committee respectfully urges the Delegates to see to it that the Committee Reports published in the 1933 Handbook are read at the next meeting of every constituent society.

Report of the Committee on Scientific Work.—This report is accepted as published in the Handbook, and we wish strongly to commend the Committee on Scientific Work for the arrangement of such an excellent scientific program, and for obtaining as special guests of the Society men of outstanding ability in their respective fields.

Report of the Committee on Arrangements.—This report is accepted as published in the Hand-

book. We wish to express our appreciation of the efforts of this Committee.

Report of the Committee on Public Policy.—This report is accepted as published in the Handbook, with the following recommendations: First, that the Delegates report to their county societies the work of this Committee, and organize a campaign of education relative to the Basic Science Law. This Committee is to be especially commended for having held thirty-two meetings, with a majority of members present at all but one meeting.

Report of the Committee on Medical Defense.—The report of the Committee is accepted as published in the Handbook, and we wish to express our appreciation of the untiring efforts of this Committee in dealing with increasing numbers of malpractice suits and threats. We wish to call attention to the fact that liability insurance policies are in force at the reduced rates granted under our master policies only so long as members maintain themselves in good standing in the Society. It is imperative that members keep their dues paid in order to keep their insurance effective.

Report of the Committee on Medical Education and Hospitals.—No business was presented to this Committee during the year and therefore no meetings were held. We wish to express our sympathy to its Chairman, Doctor Meader, in his illness.

Report of the Committee on Library and Medical Literature.—The report of this Committee is accepted as published in the Handbook. We recommend that the Delegates again inform their respective county societies of the privileges of the Library and urge its greater use.

Report of the Committee on Cooperation with Allied Professions.—The report of this Committee is accepted as published in the Handbook. We recommend that this Committee institute further measures to bring about closer and more friendly relations with the allied professions.

Report of the Committee on Medical Economics.—This report is accepted as published in the Handbook. We approve the idea suggested that the profession take the lead in bringing medical costs within the means of the low income public through the application of the insurance principle to their problems. We favor a trial by county societies offering such insurance to the classes for which it is designed. We do not believe such a trial of an insurance contract will provoke a revolution in the conduct of medical practice. We approve the suggestion that this Society through its Executive Office contact those who may intend entering this profession and inform them what medicine has to offer, both competitive and remunerative. We urge every physician to inform himself concerning medical economics and how they will affect him. We regret that the A. M. A. has not as yet been of more practical help to the physician in his economic problems, but we look to recommendations of value in the near future.

Report of the Committee on Publication.—This report is accepted as published in the Handbook, and we wish to compliment the Committee on the quality of the journal in the face of restricted finances.

Report of the Committee on Postgraduate Clinics.—This report is accepted as published in the Handbook, and offer as a suggestion that the Postgraduate Clinics be given under the auspices of the State Society, and believe that they might be advantageously held jointly with the Spring Clinics of the School of Medicine. We also sug-

gest that these Clinics should include the facilities of the other Denver hospitals as utilized this past year, and that members of the Society outside of Denver be invited to participate. We believe that the smaller communities do not offer facilities sufficient to carry out the aim of these Clinics. We suggest that the plan of holding the Clinics during Stock Show week be continued, since during this week reduced rail fares are available, and ample entertainment is available.

Report of the Committee on Workmen's Compensation Affairs.—This report is accepted as published in the Handbook. Owing to the increasing problems attendant upon the operation of the workmen's compensation laws, we urge that this Committee continue its close contact with the activities of the State Industrial Commission.

Report of the Committee on Veterans' Legislation.—This report is accepted as published in the Handbook. We recommend that this Committee be continued as a Committee on military affairs generally, and increase its scope of activities to represent this Society in all its military relations.

Report of the Advisory Committee to the School of Medicine.—This report is accepted as published in the Handbook. We wish to express our appreciation of the untiring efforts of the members of this Committee in analyzing the criticisms made against Colorado General Hospital and instituting measures to bring about more amicable understanding. We recommend that the requested appropriation of \$300.00 for financing a questionnaire of applicants for admission to the hospital be granted.

Report of the Committee on State Registration Fee.—This report is accepted as published in the Handbook. The survey made by this Committee will be of no inconsiderable value in the efforts toward repeal of the State Registration Law, which we hope the Committee on Public Policy may be able to effect at the next legislative session. We recommend that the Committee on State Registration Fee be discharged with the thanks of the Society.

Respectfully submitted,

LANNING E. LIKES, Chairman,
C. REX FULLER,
CLAUDE E. COOPER,
R. S. JOHNSTON,
G. E. CHELEY, Secretary.

Dr. Shivers moved acceptance of the report. Motion seconded by Dr. Cooper and carried.

Dr. Bouslog read the report of the Reference Committee on Audits and Appropriations as follows:

REPORT OF THE COMMITTEE ON AUDITS AND APPROPRIATIONS

Sept. 14, 1933.

To the House of Delegates:

Your Committee has the honor of reporting that we have severally examined the certificate of Hartsfield and Peabody, Certified Public Accountants, and hereby accept the certificate, entitled: "General Audit of the Accounts and Records of the Colorado State Medical Society for the year ended August thirty-first, 1933."

We recommend the adoption of the budget as published in the 1933 Handbook, as found on pages 7 and 8, with the following addition: That the House appropriate from the Society's Educational Fund Reserves the sum of three hundred dollars (\$300.00) to be used by the administration of the University of Colorado School of Medicine and Hospitals in establishing the penalty-questionnaire system of admissions as prepared jointly

by the Advisory Committee of this Society and the Dean and Superintendent of the Hospitals.

In conclusion, your Committee wishes to state that by reducing each item of the budget as much as possible, the Board of Trustees has presented a balanced budget at a figure \$3,100 under last year's expenditures.

Respectfully submitted,

JOHN S. BOUSLOG, Chairman,
HAROLD T. LOW,
D. A. VANDERHOOF,
L. W. BORTREE, Treasurer,
ex-officio.

Dr. Garwood: "Mr. President, I'd like to ask the Chairman of the Committee, Dr. Bouslog, who submitted the report, exactly what this three hundred dollars is for. It says there 'for the administration' of something connected with the Medical School and Hospital but it doesn't enumerate what it is for. Is it to buy cards or pamphlets? Or what?"

President Webb: "That was explained in the former Committee report."

Dr. Bouslog: "This is for the actual forms to be sent out to the County Commissioners and to the physicians. On these proposed forms, the patient has to sign. There are several thousand forms that have to be published. This is for the publishing of these forms and mailing them to the doctors and the County Commissioners."

Dr. McKeen: "Mr. President, I would like to ask if the individual has to sign those cards. We may find that we may spend this three hundred dollars and then discover it has no legal status whatsoever. I think the matter should be thoroughly investigated before we spend the three hundred dollars. The law specifies how people may enter the Colorado General Hospital."

"I am for such a thing, but I am against expending this money unless we know that it is going to be of some value."

Dr. Bouslog: "Mr. President, I think Mr. Sethman can explain the law that requires that. The law governing admission of patients to the Colorado General Hospital is as broad as all outdoors. Dr. Rees has given us a letter, which is in the files over at the hotel, stating that he will put this into effect."

Dr. Garwood: "Mr. President, can that part of the report go over until tomorrow until we find out and get reliable information on it?"

President Webb: "Yes, I think so."

Dr. Garwood moved acceptance of the report with the exception of the approval of the \$300 expenditure. No one seconded the motion.

President Webb: "If no one seconds the motion, the report of the Committee is before you for voting. What are your wishes? I'd like to have a motion made whether we accept it or not."

Motion to accept the report was made and carried.

President Webb called for the report of the Cancer Committee, which was made by Dr. Lyman W. Mason as follows:

Dr. Mason: "Mr. President and Members of the House of Delegates: This summer Dr. Stephenson, then President of the State Medical Society, appointed an interim Committee on Cancer, which was to organize and engineer a program of cancer education among the doctors of the State of Colorado. This Committee has had several meetings since its appointment and wishes to offer a resolution to the House of Delegates."

"I might say in amplification of what is contained in the resolution that the Committee feels that the best and most efficient plan in carrying

out this program is to organize the twenty-five constituent societies of the State Medical Society into as few geographical districts as possible and have meetings in those districts during the coming year.

"Going over the matter with Mr. Sethman, we found that fourteen is about as few as we can get the twenty-five constituent societies into.

"The plan is to organize three or four teams who will, during the coming twelve months, appear before these fourteen different groups and present symposia on the subject of cancer.

"The plan that is recommended by the American Society for the Control of Cancer and which we are more or less trying to follow is that the total time embraces a five year period and one subject is covered each year, the subject for this year being tumors of the breast.

"I wish, then, to present the following resolution to the House of Delegates on behalf of the Cancer Committee which Dr. Stephenson appointed:

"Be it

"RESOLVED, By the House of Delegates of the Colorado State Medical Society, that there is hereby created a Special Committee on Cancer Education composed of nine members serving terms as follows:

"For the Society year of 1933-34, three members shall be appointed for terms of one year; three for terms of two years and three for terms of three years; appointments in the following years being for terms of three years each or in case of vacancy, for the unexpired term."

"And be it further

"RESOLVED, That said Committee is hereby empowered to select members of the Society to present educational symposia on cancer to the constituent societies in the name of the Colorado State Medical Society, and be it further

"RESOLVED, That the constituent societies are hereby directed to cooperate with said Committee to the extent of arranging the necessary program time, either by individual societies or by groups of societies, for the presentation of said symposia."

The report was accepted upon motion of Dr. Danielson, seconded and carried. The resolution was adopted upon motion of Dr. Sevier, seconded and carried.

President Webb: "The first thing under unfinished business is the report of the Committee on Nominations, which must be submitted today."

The report was presented by Dr. Low, as follows:

REPORT OF THE COMMITTEE ON NOMINATIONS

September 14, 1933

To the House of Delegates:

Your Committee on Nominations presents the following as its choices for the positions to be filled at this session:

For President: N. A. Madler, Greeley.

For First Vice-President: Frank E. Rogers, Denver.

For Second Vice-President: A. G. Taylor, Grand Junction.

For Third Vice-President: C. E. Sidwell, Longmont.

For Fourth Vice-President: Ward C. Fenton, Rocky Ford.

For Constitutional Secretary (for a three-year term): John S. Bouslog, Denver.

For Councillor of the First District (for a three-year term): F. W. Lockwood, Fort Morgan.

For Councillor of the Second District (for a three-year term): Ella A. Mead, Greeley.

For Councillor of the Third District (for a three-year term): G. P. Lingenfelter, Denver.

For Councillor of the Fourth District (for a two-year term): C. T. Knuckey, Lamar.

For Councillor of the Fifth District (for a two-year term): George D. Andrews, Walsenburg.

For Councillor of the Sixth District (for a two-year term): C. Rex Fuller, Salida.

For Councillor of the Seventh District (for a one-year term): A. L. Burnett, Durango.

For Councillor of the Eighth District (for a one-year term): Lee Bast, Delta.

For Councillor of the Ninth District (for a one-year term): W. W. Crook, Glenwood Springs.

For Delegate to the American Medical Association (for a two-year term): Crum Epler, Pueblo.

For Alternate Delegate to the American Medical Association (for a two-year term): John B. Crouch, Colorado Springs.

For Member of the Committee on Publications (for a three-year term): C. F. Kemper, Denver.

For the place of the next annual session: Colorado Springs; the meeting to be held in September, 1934, the exact time to be fixed by the Committee on Scientific Work and the Secretary.

Respectfully submitted,

HAROLD T. LOW, Chairman,
G. C. CARY,
H. R. McKEEN,
O. E. BENNELL,
JOHN A. SEVIER, Secretary.

Dr. Fulwider moved acceptance of the report; seconded by Dr. Bortree and carried.

Dr. Yegge: "Mr. President, in reference to the report of the Advisory Committee to the School of Medicine, I think we have had a committee for two or three years on that subject. This year the Committee has certainly obtained results. This Committee has worked hard. Each individual has been at all meetings. After they have accumulated all this data and all this work has been done, I feel that the Committee should be continued. That is, there should be a staggered term of office over one, two, three, four and five years, so that some of the present Committee should still be on the Committee up to five years.

"Therefore, I move that this same personnel be continued with the appointment of this same Committee over the period of one, two, three, four and five years, respectively, as you deem advisable to name the different members for the coming year."

Dr. Webb: "Dr. Yegge, does that need a motion, or is that up to me?"

Dr. Yegge: "I make a motion that that is the sense of the delegates."

Dr. Bortree: "I rise to a point of order. According to the by-laws of the Society, members of committees will have their terms terminate with the termination of office of the President appointing them."

Mr. Sethman: "The Constitution and By-Laws state in Section 2, Chapter X, entitled 'Committees', 'Except as hereinafter provided, and subject to the direction of the power creating special committees, the President shall appoint the Chairman and members of all standing and special committees and their terms shall coincide with that of the appointing President.'

"In other words, this House of Delegates created this Advisory Committee and the House of Delegates can direct, if it so desires, that the members hold over longer than the one year."

Dr. Garwood: "Mr. President, I rise to support

the question raised by Dr. Bortree because I believe that the by-law should be interpreted according to Roberts' Rules of Order and I don't believe that a President can appoint a committee which is extended over a period of years, because it takes away the power of the President who will succeed him and the House of Delegates will never be the same. It seems to me that it is usurping the power of the President. Therefore I feel it is absolutely impossible, according to Roberts' Rules of Order by which we are governed, for any President or any officer of the Society to appoint a committee which will hold over unless it is by special direction of the House of Delegates and by a vote of the House of Delegates at this time."

President Webb: "That is what the motion would do, if there is a vote of the House of Delegates that that is your wish. That can be done, I believe."

Dr. Garwood: "I'd like a ruling on the point of order."

President Webb: "Dr. Yegge has gone. You heard his request that the President should reappoint the Committee. Someone could make that in the form of a motion directing the President to do that."

Dr. Fulwider: "I rise to a point of information. Is this Committee to be a continuous affair, and is one man to be appointed after this year for a five-year term and each year another man appointed for a five-year term? Is that the sense of the motion?"

Dr. McKeen: "Five years is a long time to serve on a committee, Mr. President. I feel that if such a committee is to be appointed, it should be appointed for a period so no man could serve more than three years."

"I feel that the President of this or any other organization should not have taken from him the right to appoint his own committees. Although this Committee is as efficient as we could possibly select and our incoming President might reappoint its members, I feel it isn't justice to him to force him to take any committee."

Dr. Andrew: "I move as an amendment to the original motion that it be the recommendation of this House of Delegates to the President that he reappoint the Committee for the ensuing year."

Dr. Garwood: "The point of order has been raised and it hasn't been passed on yet. We'd like to have a ruling from the Chair."

Dr. Yegge: "I will withdraw my original motion and leave Dr. Andrew's motion stand."

President Webb: "As I understand it, the President has the power to appoint these committees. Of course I am sure that personally I'd be grateful for all your help in advance in the matter of appointing these committees, and I won't feel at all badly if you direct me to appoint the same committee. I should be delighted to do so."

"But as to the other matter proposed by Dr. Yegge relative to the terms being one, two, three, four and five years, I don't see how it possibly can be carried out without some change in the by-laws, amendments, etc. I think that was more or less out of order. Is that the point you are asking for?"

Dr. Garwood: "I want a ruling on the point of order. That is all."

Dr. Yegge: "I have withdrawn the motion."

Dr. Garwood seconded Dr. Andrew's motion.

President Webb asked if anyone wished to discuss the motion.

Dr. Cooper: "Mr. President, I hope the motion does not prevail. I don't think the President of the Society needs direction as to who his com-

mittees are to be. I believe any committee that has been as active and produced as much work as this Committee has this past year will be given very grave and important consideration by any President in office the coming year. I think it is an unnecessary motion. I believe the discretionary powers of the President in the appointment of committees should not be interfered with."

Dr. Stephenson: "I believe under the new ruling I have the privilege of the floor. It strikes me that Dr. Yegge's idea was primarily that this should be a Committee which should not change entirely every year. Now it doesn't matter so much whether the personnel is the same, to my mind, but it does seem to me that with the importance of the Committee it would be well if it were staggered so that all the members wouldn't go off at one time and have an entirely different set of men who would have to study all the work of the previous Committee and acquaint themselves with it before they could go on."

"I certainly shouldn't like to be looked upon as myself having appointed a Committee which was forced upon the succeeding President. As far as I am concerned, I'd just as soon see this motion that has been made defeated and see another motion made that the Committee should have staggered terms for its personnel, so that its work could be carried on in a more continuous way. In other words, I think the House of Delegates could direct that it be made a staggered Committee rather than a completely new Committee each year."

"That would not be beyond the by-laws, would it, Dr. Garwood? I think that is entirely within the power of the House of Delegates, which created the Committee, to state how it should be constituted. Isn't that true, Dr. Webb? I do feel strongly that all these important committees should not be changed entirely each year."

Dr. Heusinkveld: "I stand with Dr. Cooper and Dr. Stephenson on that—that the incoming President should be left free to make his own selection of committees. Furthermore, I think that this sort of thing establishes a precedent that might at some later time come back on us. I think we ought to be very careful about establishing precedents which are contrary to the policy of this body up to this time."

Dr. Garwood: "I simply want to state that I interpreted Dr. Andrew's motion as a recommendation to the President. He can accept the recommendation or not, just as he wishes. It is purely a recommendation that this Committee be continued for another year and there is nothing in it giving him any power or taking away any power from him. It is simply a recommendation of the House of Delegates."

Dr. Yegge: "My original idea in bringing this motion was to bring before this House the important work of this Committee, and bring before the President the idea that these men have done wonderful work and that he should retain some of those present members on the Committee so that this work would be continued. I think Dr. Andrew's motion would be in order. It is simply a recommendation and nothing else. The President can act as he wishes."

Dr. Andrew: "It is for the purpose of clarifying the original motion that I offered my suggestion. I think it is up to you to use your own prerogative, but we recommend, as a House of Delegates, that this Committee suits us."

President Webb: "I appreciate your guidance and I will follow it."

Dr. Andrew's motion was put to vote. On aye and nay vote the Chair was in doubt. Rising vote

was taken, resulting in passage of the motion 16 to 11.

The President asked for further new business.

Mr. Sethman: "Mr. President, the Committee which Dr. Stephenson appointed this morning to draw a resolution in regard to the death of Mrs. John R. Espey has asked me to read the resolution:

The House of Delegates of the Colorado State Medical Society, assembled in Colorado Springs at its Sixty-third Annual Session, is shocked and deeply grieved to learn of the death of Mrs. Espey, wife of Dr. John R. Espey, a past President of our Society.

We extend to him and to his family our deepest sympathy. Therefore, be it

RESOLVED, That a copy of this resolution be sent to the family and spread upon our records.

(Signed) H. T. LOW,

H. R. McKEEN,

C. H. DARROW.

The resolution was adopted by motion duly carried.

Dr. Minnig offered the following resolution:

WHEREAS, There exists at the present time in the State of Colorado an urgent need of a State Sanitarium to care for its dependent tuberculous citizens; and

WHEREAS, The Agnes Memorial Sanitarium will be offered as a gift to the State of Colorado through its Board of Trustees by the Honorable Lawrence C. Phipps; and

WHEREAS, This offer of the Agnes Memorial Sanitarium does not carry any expense to the State of Colorado for two years, as the Board of Trustees is willing to carry the upkeep and insurance until 1935; and

WHEREAS, This is a wonderful opportunity for the State of Colorado to acquire for its dependent tuberculous citizens, free, an institution which would require many thousands of dollars to build; be it

RESOLVED, That the House of Delegates of the Colorado State Medical Society, sitting in executive session, hereby request the Hon. E. C. Johnson, Governor of the State of Colorado, to accept this institution as a gift for the care of the tuberculous exclusively; and be it further

RESOLVED, That the House of Delegates of the Colorado State Medical Society request the Hon. E. C. Johnson, Governor of the State of Colorado, to devise a better means of taking care of the dependent tuberculous citizens of the State of Colorado in case the gift of the Agnes Memorial Sanitarium is not accepted.

Dr. Minnig then moved adoption of the resolution. Seconded by Dr. Bortree.

Dr. Fulwider: "At the American Legion convention in Durango a few weeks ago this same proposition was brought up. I know that the State Medical Society will have the full support of the Child Welfare Division of the American Legion and we will have a wonderful opportunity there, through the Legion, to educate the public on the need of care for undernourished and underdeveloped children."

Dr. Selis: "I'd like to know how this will be financed after the first two years have elapsed."

Dr. Barnard: "Mr. President, it seems to me that there is only one way for the Medical Society of the State of Colorado to get the things they want; that is as Dr. Low intimated a while ago, to organize so that when we have the next legislature up in Denver we can go to the legis-

lature and go to the Governor and tell them what we want and there won't be any question but that we can get it. I think if we had a better organization and put in men that we want instead of men like Dr. Twining and Dr. Calkins and some of these others, we could go to the Governor and ask him and he'd see that an institution like this is financed."

Dr. Garwood: "Mr. President, I think it would be wise for us to appoint a Committee to investigate this thing and report it to the next meeting of the House of Delegates. The matter was brought up before the Denver County Medical Society and there wasn't a uniform action at that time. It was reported on by a special Committee. The report of the Committee was adopted that the Agnes Memorial Sanitarium be not accepted.

"I think it would be wise for us to get the opinion before we pass any resolution accepting it or rejecting it. A special Committee could be appointed for that purpose. I therefore move that a Committee of three be appointed to investigate this thing before the matter is brought up for a vote. I don't think everybody here is conversant with the pros and cons of it and I therefore move that this Committee of three be appointed by the President to report on this matter at the next meeting."

President Webb: "I might say the Public Policy would be the Committee to consider that."

Dr. Lingenfelter: "A point of information. Do I understand that this is for indigent tuberculous only?"

Dr. Minnig: "Yes."

Dr. Low: "It seems to me that any recommendation coming from this Society would have to carry with it provisions for administration of this hospital, and also the first thing the Governor will say is, 'What are we going to do after 1935?'"

"We've got to have some recommendation on that and some idea of what it is going to cost to run it. The legislature has cut down the appropriations for our present State hospitals now, and they are certainly not going to be in a very good frame of mind to take on anything new unless we can give them something definite and show them the reason why."

Dr. Minnig: "Mr. President, we already are paying for our indigent tuberculous what it costs to run this institution."

President Webb: "We are not facing our tuberculosis problem; that is quite right. Wouldn't a substitute motion be in order to refer this to the Public Policy Committee?"

Dr. Garwood: "I make such a motion.—that we refer it to the Public Policy Committee and they report to the next meeting of the House of Delegates."

Dr. McKeen: "This matter was brought up before the Public Policy Committee last year."

Dr. Low: "I rise to a point of order. This last motion is out of order. There is a motion to accept this resolution."

Dr. McKeen: "The proposition was put before that Committee last year in such a way that the Committee did not act very favorably upon it on account of it being a bill and not entirely a proposition."

"Something must be done with the tuberculosis situation in this State. As everyone knows, who knows much about tuberculosis or much about medicine, these people gravitate to Colorado Springs and to Denver and then perhaps to Boulder and back to Denver and so on. You have no place to take care of these contacts. Children in tuberculous homes stay there until they get

tuberculosis. Some of them get well, perhaps, but they do constitute a continuous menace.

"This isn't only a humanitarian thing. It strikes right at your pocketbook. If we can lessen tuberculosis, childhood tuberculosis, you are going to lessen your taxes eventually.

"The bugbear that has always stood before us is that we are going to relieve a lot of indigents from other states. I am not discussing the economic phase of it, but I am in favor of the motion from a humanitarian standpoint, and for the relief of the various charity agencies, in the care of contacts especially."

Dr. Stephenson: "May I say, Mr. Chairman, that I am conversant with the question as it was discussed before the Public Policy Committee during my regime. I think the stumbling block for the Committee at that time was that the bill was not explicit as to the administration of the institution and as to whether it would be for indigents only or whether it would be thrown wide open for the reception of pay patients, in which case the form of administration and the physician care of those pay patients was not described. The Committee didn't know whether it would bring another problem up to the State Society with regard to infringement on private practice. It was too indefinite in every respect. There was a clause in the bill that said it should be made as far as possible self-supporting.

"If Dr. Minnig would word his resolution explicitly to the effect that this should be accepted for the care of indigent patients only, there would be no objection to it as far as I am concerned. You say 'dependent tuberculous patients.' I think you should say 'dependent tuberculous patients only,' and then perhaps the word 'dependent' would have to be defined."

Dr. Heusinkveld: "We have this tuberculosis problem and it ought to be and must be taken care of. For our tuberculous children we need a sanitarium, but when you go to this plant called the Agnes Memorial, you can see it is an old building. It was an old-timer in 1908. When you consider the amount of renovating needed, the amount of remodeling necessary to take a plant built for people who pay their own way from \$20 to \$50 to even higher prices per week, to remodel those large spaces so that they will be fit to be used by indigent persons, and when you recall that you can take care of a hundred and seventy-five to two hundred at the outside, you discover soon that it is an impractical proposition.

"If you put up other buildings, you will have to enlarge the heating plant, then the laundry, and so on. It seemed to us more economical and better in the long run for the taxpayers—and we'd have a more satisfactory institution—if we all get behind the idea of a new tuberculosis sanitarium. Let us build it new, on the modern unit plan, so that it can grow without waste and the liability of taking a thing to pieces and putting it back together again at the outset."

Dr. Stephenson: "I'd like to hear from Dr. Robert Levy on this question. He has been connected with an eleemosynary tuberculosis institution for a long time."

Dr. Levy: "Mr. Chairman, I don't wish to discuss this question. There are a good many angles to it. The essential thing that is before us here is whether we as a body shall recommend to the State that it accept this institution known as the Agnes Memorial Sanitarium.

"I think the motion that has been made for the present answers all purposes, namely, that it be referred to a Committee, whether that Committee be a standing Committee of this body or not. It

probably should be sent to our Public Policy Committee. When this Committee takes the matter under advisement, they will find a big job on their hands and therefore we should give them plenty of time. We can't tonight advise what that Committee shall find or what that Committee shall do or make any recommendation to the Governor.

"The proper mode of procedure, it seems to me, is along the line of careful investigation. I think our Committee on Public Policy is the one to make that investigation."

The motion to adopt Dr. Minnig's resolution was voted upon and the resolution was defeated.

Dr. Garwood then moved that the resolution of Dr. Minnig be referred to the Public Policy Committee, and that the Committee report at the next session of the House of Delegates.

On the aye and nay vote, the Chair was in doubt. Upon counted vote, the motion was carried. The resolution was referred to the Public Policy Committee.

President Webb: "Gentlemen, there is a matter here on which I wish your guidance. I have just received a telegram tonight from Grace Abbott, Head of the Children's Bureau in Washington. I wouldn't present it to you except that it is a little bit ambiguous, her request to me being worded to me as President of the State Society.

"Will you, as President of the Colorado State Medical Society, attend conference to consider plans for child health recovery called by Secretary of Labor to be held October 6 in Washington?"

"Had she not put 'as President of the Colorado State Medical Society,' I wouldn't bother you with the telegram. I have no authority to go as President of the Society, of course, without your giving me that authority."

Dr. Danfelson moved that the President be given permission to go to this Washington conference providing he sees fit to go; motion seconded and carried.

Dr. Shivers, after a lengthy preamble, offered the following motion:

"That the President appoint from the membership of this Society a committee of three to study the nursing situation as it obtains in both the urban and rural sections of Colorado; particular attention being given to the status of the nurse, the hospital, the training school, and in connection therewith the requirements of the medical profession in supplying adequate and dependable nursing service to those in need thereof both in the home and hospital; and that such committee report its findings to the House of Delegates at the next annual session."

The motion was seconded by Dr. Andrew.

Discussion followed, which by vote of the House in executive session, was stricken from the minutes.

Dr. Garwood proposed an amendment to the by-laws, Chapter X, Section 11, line 4, between the word "veterinary" and the word "professions" insert the words "and nursing," which would permit the handling of this matter without appointment of a special committee.

After further discussion (not transcribed), Dr. Shivers' motion to appoint a committee of three to investigate the matter of the Board of Nurse Examiners was carried.

Dr. Garwood renewed his amendment. The Executive Secretary noted same and stated it would be brought up for voting on Saturday at the meeting of the House of Delegates.

The meeting thereupon adjourned.

(Continued on Page 515)

List of Members of the Colorado State Medical Society

Corrected to November 25, 1933*

AGUILAR, COLORADO

Name	Address	Telephone	Society
Horsky, Brooke	Aguiar	Aguiar 25	Las Animas
McClelland, M. A.	Aguiar	Aguiar 6	Las Animas

AKRON, COLORADO

Crawford, M. L.	Akron	Akron 16-J	Denver
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ALAMO, COLORADO,

Whitehouse, William N.	Alamo	Walsenburg 020-J3	Huerfano
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ALAMOSA, COLORADO

Anderson, Sidney	First State Bank Building	Alamosa 311	San Luis Valley
Davlin, C. A.	MacDonald Bldg.	Alamosa 75	San Luis Valley
Day, R. J.	Legion Bldg.	Alamosa 627	San Luis Valley
Dorsey, C. W.	First State Bank Bldg.	Alamosa 311	San Luis Valley
Herriman, L. L.	First State Bank Building	Alamosa 46	San Luis Valley
Rupert, J. K.	Elks Bldg.	Alamosa 22	San Luis Valley

ANTONITO, COLORADO

Hurley, J. R.	Antonito	Antonito 3-J	San Luis Valley
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ARRIBA, COLORADO

Keller, C. J.	Arriba	Arriba 14	Kit Carson
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ARVADA, COLORADO

Dill, R. D.	Arvada	Arvada 105	Denver
McBrayer, B. E.	Arvada	Arvada 60	Denver

ASPEN, COLORADO

Twining, W. H.	Aspen	Aspen 83	Garfield
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AULT, COLORADO

Anderson, A.	Ault	Ault 58	Weld
McCain, A. C.	Ault	Ault 1-W	Weld

BERTHOUD, COLORADO

Hardesty, W. B.	Berthoud	Berthoud 48	Larimer
Howell, J. D.	Berthoud	Berthoud 55	Larimer
McCarty, D. W.	Berthoud	Berthoud 16-J2	Larimer

BOULDER, COLORADO

Alexander, Harry A.	First National Bank	Boulder 164	Boulder
Baird, W. J.	402 Pine Street	Boulder 834	Boulder
Bonham, C. D.	Physicians Bldg.	Boulder 50W	Boulder
Farrington, F. H.	Mercantile Bank Bldg.	Boulder 246	Boulder
Farrington, Paul R.	Mercantile Bank Bldg.	Boulder 246	Boulder
Fischer, V. B.	Mercantile Bank Bldg.	Boulder 641W	Boulder
Gilbert, O. M.	Physicians Bldg.	Boulder 104	Boulder
Gilbert, W. M.	Physicians Bldg.	Boulder 104	Boulder
Graf, Carl H.	Physicians Bldg.	Boulder 232	Boulder
Gillaspie, John D.	First National Bank Bldg.	Boulder 82W	Boulder
Green, H. A.	4th & Mapleton	Boulder 1800	Boulder
Hartzell, H. W.	Boulder-Colorado Sanitarium	Boulder 1800	Boulder
Heuston, H. H.	First Natonial Bank Bldg.	Boulder 27W	Boulder
Johnson, Margaret L.	Boulderado Hotel	Boulder 322	Boulder
Klopfenstein, Fred C.	Boulder-Colorado Sanitarium	Boulder 1800	Boulder
McCabe, F. H.	764 15th St.	Boulder 634	Boulder
Muenzinger, Florence W.	963 7th St.	Boulder 1240J	Boulder
Reed, W. K.	Physicians Bldg.	Boulder 1848W	Boulder
Reckwell, Orville	Boulder-Colorado Sanatorium	Boulder 1800	Boulder
Spencer, F. R.	Physicians Bldg.	Boulder 23	Boulder

BRIGHTON, COLORADO

Hotchkiss, W. K.	Brighton	Brighton 104W	Denver
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*Every effort has been made, up to the moment of going to press, to present this directory with absolute accuracy. To this end, final proof was checked with the latest information lists of the Mountain States Telephone & Telegraph Company and the U. S. Postoffice at Denver. If an error exists the Executive Office of the Society will appreciate immediate notification.

BROADMOOR, COLORADO

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Joy, Homer T.	Broadmoor	Main 1537	El Paso

BRUSH, COLORADO

Eakins, C. F.	Brush	Brush 62J	Morgan
Hildebrand, P. R.	Brush	Brush 50W	Morgan
Lusby, A. C.	Brush	Brush 6J	Morgan

BUENA VISTA, COLORADO

Lillienthal, Samuel	S. C. C. Camp		Denver
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BYERS, COLORADO

Lorimer, Hugh F.	Byers	Byers 13	Denver
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CALHAN, COLORADO

Chandler, Gilbert B.	Calhan	Calhan 10W	El Paso
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CAMPO, COLORADO

Patterson, R. F.	Campo	Campo 49 F 2	Prowers
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CANON CITY, COLORADO

Bee, Archie	417 Macon Ave.	Canon City 70	Fremont
Graves, C. H.	602 Macon Ave.	Canon City 149W	Fremont
Graves, H. C.	602 Macon Ave.	Canon City 320	Fremont
Hinshaw, J. D.	116 No. 7th St.	Canon City 142	Fremont
Holmes, R. E.	5th & Greenwood Ave.	Canon City 30	Fremont
Lynch, E. B.	Apex Bldg.	Canon City 388J	Fremont
Maxwell, J. G.	Apex Bldg.	Canon City 34J	Fremont
Shoun, D. A.	Apex Bldg.	Canon City 475	Fremont
Shoun, J. G.	Apex Bldg.	Canon City 475	Fremont
Webb, E. C.	Apex Bldg.	Canon City 102	Fremont
Wyatt, Kon	Postoffice Bldg.	Canon City 286J	Fremont

CARBONDALE, COLORADO

Tubbs, W. R.	Carbondale	Carbondale 35	Garfield
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CASTLE ROCK, COLORADO

Palmer, W. A.	Castle Rock	Castle Rock 27J	Denver
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CEDAREEDGE, COLORADO

Aust, T. H.	Cedaredge	Cedaredge	Delta
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CENTER, COLORADO

Carmichael, E. K.	Center		San Luis Valley
Greenfield, Lewis J.	Center	Center 7	San Luis Valley

CHANDLER, COLORADO

Goodwin, Aurel	Chandler	Chandler 15R3	Fremont
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CHERAW, COLORADO

Pitney, Orville	Cheraw	Cheraw 37-F3	Otero
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CHEYENNE WELLS, COLORADO

Myers, L. N.	Cheyenne Wells	Cheyenne Wells 103	Garfield
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COLLBRAN, COLORADO

Watson, W. V.	Collbran	Collbran 15-J4	Mesa
Zeigle, Henry H.	Collbran	Collbran 41	Mesa
Zinke, Wm.	Collbran		Mesa

COLORADO SPRINGS, COLORADO

Allen, L. R.	Ferguson Bldg.	Main 1820	El Paso
Baker, Fred R.	18 Independence Bldg.	Main 4477	El Paso
Bancroft, G. W.	Ferguson Bldg.	Main 2259	El Paso
Beeson, H. B.	Ferguson Bldg.	Main 1391	El Paso
Boisservain, C. H.	Colorado College	Main 2449	El Paso
Bortree, L. W.	Ferguson Bldg.	Main 3181	El Paso
Boyd, G. A.	Exchange National Bank Bldg.	Main 803	El Paso
Brady, E. J.	Colorado Springs Psychopathic Hospital	Main 3703	El Paso
Brobeck, V. H.	Ferguson Bldg.	Main 126	El Paso
Brown, J. H.	Burns Bldg.	Main 45	El Paso
Brown, L. G.	707 No. Cascade Ave.	Main 1999	El Paso
Campbell, William A.	Exchange National Bank Bldg.	Main 104	El Paso
Chapman, E. N.	1101 N. Tejon St.	Main 2160	El Paso
Chapman, S. J.	Burns Bldg.	Main 781	El Paso
Coghlan, J. T.	204 First National Bank Bldg.	Main 753	El Paso
Conway, L. A.	Ferguson Bldg.	Main 4160	El Paso

COLORADO SPRINGS (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Corlett, T. G.	First National Bank Bldg.	Main 753	El Paso
Crouch, J. B.	Ferguson Bldg.	Main 4160	El Paso
Cunning, J. E.	Burns Bldg.	Main 444	El Paso
Dennis, F. L.	2501 N. Nevada Avenue	Main 2664J	El Paso
Drea, W. F.	Burns Bldg.	Main 961	El Paso
Dworak, F. E.	First National Bank Bldg.	Main 691	El Paso
Evans, T. J.	Crestone Heights Sanitarium	Main 687	El Paso
Faust, F. A.	819 N. Nevada Ave.	Main 407	El Paso
Forster, A. M.	Cragmor Sanatorium	Main 122	El Paso
Fountain, A. S.	2901 W. Colorado Ave.	Main 5664	El Paso
Giese, C. O.	316 Ferguson Bldg.	Main 4160	El Paso
Gilbert, George B.	402 Burns Bldg.	Main 1212	El Paso
Gillett, O. R.	Independence Bldg.	Main 23	El Paso
Gilmore, George B.	Independence Bldg.	Main 23	El Paso
Good, B. D.	Cragmor Sanitarium	Main 122	El Paso
Goodson, H. C.	Exchange National Bank Bldg.	Main 150	El Paso
Gydesen, Carl S.	Ferguson Bldg.	Main 3712	El Paso
Haney, J. R.	First National Bank Bldg.	Main 473	El Paso
Hanford, Peter O.	720 No. Nevada Ave.	Main 1151	El Paso
Hartwell, John B.	Burns Bldg.	Main 218	El Paso
Hereford, John H.	Burns Bldg.	Main 57	El Paso
Hill, Lawrence H.	Burns Bldg.	Main 4559	El Paso
Hills, W. K.	Ferguson Bldg.	Main 665	El Paso
Holland, A. C.	Suite 208, Mining Exchange Bldg.	Main 800	El Paso
Howell, W. C.	Exchange National Bank Bldg.	Main 669	El Paso
Kettlekamp, Fred O.	Ferguson Bldg.	Main 267	El Paso
Knowles, Tom R.	Mining Exchange Bldg.	Main 78	El Paso
Lennox, P. M.	Burns Bldg.	Main 1039	El Paso
Liddle, E. B.	Burns Bldg.	Main 392	El Paso
Loomis, P. A.	Ferguson Bldg.	Main 4160	El Paso
Mahoney, J. J.	First National Bank Bldg.	Main 305	El Paso
Marbourg, E. M.	212 Burns Bldg.	Main 472	El Paso
McClanahan, Z. H.	Exchange National Bank Bldg.	Main 150	El Paso
McConnell, J. F.	Ferguson Bldg.	Main 4160	El Paso
McCorkle, H. B.	First National Bank Bldg.	Main 1075	El Paso
McCracken, C. P.	462 First National Bank Bldg.	Main 1075	El Paso
McCrossin, W. P., Jr.	Burns Bldg.	Main 444	El Paso
McIntyre, T. A.	First National Bank Bldg.	Main 3641	El Paso
Miller, L. A.	Exchange National Bank Bldg.	Main 2898	El Paso
Morrison, C. S.	2514 W. Colorado Ave.	Main 965	El Paso
Mullett, A. M.	2006 Ridgeway	Main 4079J	El Paso
Murphey, Bradford J.	104 E. Rio Grande St.	Main 4005	El Paso
Neeper, E. R.	Exchange National Bank Bldg.	Main 1	El Paso
Owens, R. L.	Independence Bldg.	Main 326	El Paso
Powell, H. M.	64 Independence Bldg.	Main 4547	El Paso
Prior, F. H.	720 N. Tejon	Main 4052M	Pueblo
Richmond, C. E.	222 E. Dale St.	Main 821	El Paso
Rothrock, F. B.	Independence Bldg.	Main 326	El Paso
Ryder, Charles T.	Burns Bldg.	Main 1626	El Paso
Schaefer, S. W.	112 Exchange National Bank Bldg.	Main 242	El Paso
Service, W. C.	402 Burns Bldg.	Main 1212	El Paso
Sevier, J. A.	Burns Bldg.	Main 4180	El Paso
Shivers, G. C.	464 First National Bank Bldg.	Main 305	El Paso
Shivers, M. O.	First National Bank Bldg.	Main 305	El Paso
Slattery, J. N.	Colorado Springs Psychopathic Hospital	Main 3703	El Paso
Smith, W. A.	Ferguson Bldg.	Main 3711	El Paso
Staines, Minnie E.	Burns Bldg.	Main 724	El Paso
Stevens, Frank T.	211 Ferguson Bldg.	Main 1240	El Paso
Stine, George H.	Burns Bldg.	Main 5090	El Paso
Stough, C. F.	Ferguson Bldg.	Main 4160	El Paso
Timmons, E. L.	712 Exchange National Bank Bldg.	Main 193	El Paso
Tucker, Beverly	1130 No. Nevada Ave.	Main 1166	El Paso
Vanderhoof, D. A.	Exchange National Bank Bldg.	Main 77	El Paso
Webb, G. B.	402 Burns Bldg.	Main 1212	El Paso
Williams, Judson T.	Ferguson Bldg.	Main 3711	El Paso
Winternitz, David H.	Burns Bldg.	Main 4559	El Paso
Woodward, Harry W.	Ferguson Bldg.	Main 4160	El Paso

CORTEZ, COLORADO

Calkins, R. W.	Cortez	Cortez 77	San Juan
Johnson, E. E.	Cortez	Cortez 8	San Juan

CRAIG, COLORADO

Name	Address	Telephone	Society
Bailey, B. M.	Craig	Craig 26	Northwestern
Cook, D. M.	Craig	Craig 148W	Northwestern
Smith, A. E.	Box 306, Craig	Craig 38	Denver

CREEDE, COLORADO

McKibbin, Samuel	Creede	Creede 24W	San Luis Valley
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CRESTED BUTTE, COLORADO

Alford, J. S.	Crested Butte	Crested Butte 10J	Denver
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CRIPPLE CREEK, COLORADO

Hassenplug, W. F.	Cripple Creek	Cripple Creek 132	El Paso
Stahr, H. S.	Cripple Creek	Cripple Creek 132	El Paso

DELAGUA, COLORADO

Jackson, Eugene	Delagua	Trinidad 041R2	Las Animas
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DEL NORTE, COLORADO

Gjellum, A. B.	Del Norte	Del Norte 30	San Luis Valley
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DELTA, COLORADO

Bast, L.	Colorado Bank & Trust Co. Bldg.	Delta 295	Delta
Burgin, C. H.	358 Main St.	Delta 37W	Delta
Cleland, W. S.	Delta	Delta 102W	Delta
Day, W. A.	Colorado Bank & Trust Co. Bldg.	Delta 294	Delta
Erich, A. F.	Hillman Bldg.	Delta 40	Delta
Hick, Lawrence A.	Colorado Bank & Trust Co. Bldg.	Delta 293	Delta
Hick, L. L.	Colorado Bank & Trust Co. Bldg.	Delta 293	Delta
McClanahan, A. C.	Delta	Delta 73-J1	Delta
Miller, A. E.	Delta	Res. Delta 242W	Delta
Phillips, Edward R.	Hilman Bldg.		Denver

DENVER, COLORADO

Albi, Rudolph	309 American Bank Bldg.	Keystone 7703	Denver
Allen, Kenneth D. A.	452 Metropolitan Bldg.	Tabor 4208	Denver
Allen, Phillip C. C.	224 Republic Bldg.	Main 2235	Denver
Allen, R. S.	25 E. Iowa Ave.	Pearl 0211	Denver
Altieri, J. A.	4057 Tejon St.	Gallup 6854	Denver
Ambler, J. V.	646 Metropolitan Building	Keystone 6431	Denver
Amesse, J. W.	624 Metropolitan Bldg.	Tabor 0181	Denver
Anderson, C. W.	224 Republic Bldg.	Main 2235	Denver
Anderson, Thompson	210 Metropolitan Bldg.	Tabor 4938	Denver
Apperson, E. L.	1035 Republic Bldg.	Tabor 6956	Denver
Argall, A. J.	920 Metropolitan Bldg.	Keystone 5304	Denver
Arndt, R. W.	100 Metropolitan Bldg.	Main 4187	Denver
Arneill, James Rae	100 Metropolitan Bldg.	Main 4187	Denver
Ashley, G. H.	432 Republic Bldg.	Tabor 8044	Denver
Atcheson, George	405 Tabor Bldg.	Main 1776	Denver
Attwood, A. De Forest	4635 W. 38th Ave.	Gallup 0127	Denver
Bagot, W. S.	500 17th St.	Tabor 3221	Denver
Bane, W. M.	1005 Republic Bldg.	Keystone 5731	Denver
Barber, W. W.	624 Metropolitan Bldg.	Tabor 0181	Denver
Barnard, H. I.	1707 E. 18th Ave.	York 7720	Denver
Barney, J. Murray	234 Mack Bldg.	Tabor 2541	Denver
Baskin, M. J.	125 Republic Bldg.	Keystone 5913	Denver
Bassow, S. H.	703 Republic Bldg.	Keystone 7907	Denver
Bates, Mary E.	228 Majestic Building	Keystone 7314	Denver
Baum, Harry L.	510 Republic Bldg.	Tabor 2954	Denver
Beaghtler, Amos L.	414 14th St.	Tabor 7151	Denver
Beall, W. C.	3525 W. 49th Ave.	Gallup 1438	Denver
Beers, Ida V.	940 Metropolitan Bldg.	Keystone 2661	Denver
Beggs, W. N.	1403 Delaware St.	Main 2540	Denver
Bell, C. C.	309 Republic Bldg.	Tabor 4353	Denver
Best, T. E.	411 Mack Bldg.	Main 3457	Denver
Beyer, T. E.	418 Majestic Bldg.	Tabor 3800	Denver
Bigelow, May T.	15 Pearl St.	Spruce 2573	Denver
Bingham, W. J.	624 Metropolitan Bldg.	Keystone 8394	Denver
Black, Melville	424 Metropolitan Bldg.	Keystone 5617	Denver
Black, Mervin H.	3800 E. Colfax	York 5410	Denver
Black, W. C., Jr.	4200 E. 9th Ave.	York 8500	Denver
Blanchard, W. E.	601 Republic Bldg.	Main 3609	Denver
Blank, Henry	1218 Republic Bldg.	Main 4798	Denver
Blickensderfer, G. M.	44 Franklin St.	York 2862	Denver
Block, Leon	223 Majestic Bldg.	Tabor 5593	Denver
Blosser, John R.	153 Welton St.	Main 3445	Denver

DENVER (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Bluemel, C. S.	550 Metropolitan Bldg.	Tabor 4078	Denver
Bonesteel, A. E.	520 Metropolitan Bldg.	Keystone 6011	Denver
Bouslog, J. S.	246 Metropolitan Bldg.	Tabor 3337	Denver
Bowers, Abern E.	1023 Republic Bldg.	Tabor 8800	Denver
Bramley, J. R.	423 Majestic Bldg.	Main 5746	Denver
Brandenburg, H. P.	155 Metropolitan Bldg.	Keystone 0523	Denver
Brandon, E. Agnes	829 Majestic Bldg.	Keystone 3800	Denver
Brinton, W. T.	406 Republic Bldg.	Keystone 8231	Denver
Bronfin, I. D.	3800 E. Colfax Ave.	York 5410	Denver
Brown, Harry C.	330 Republic Bldg.	Tabor 1053	Denver
Brown, L. T.	522 Republic Bldg.	Keystone 1571	Denver
Brown, M. D.	432 Republic Bldg.	Main 2889	Denver
Buchtel, Henry A.	1121 Milwaukee St.	Franklin 2108	Denver
Buck, G. R.	1271 Kalamath St.	Tabor 7856	Denver
Bundsen, C. A.	738 Metropolitan Bldg.	Tabor 2265	Denver
Burnett, C. T.	550 Metropolitan Bldg.	Tabor 5428	Denver
Burns, T. Mitchell	830 Metropolitan Bldg.	Main 3508	Denver
Bush, C. E.	30 E. Dakota St.	Spruce 0016	Denver
Butman, W. W.	833 Majestic Bldg.	Keystone 7823	Denver
Canby, H. S.	606 Metropolitan Bldg.	Keystone 2051	Denver
Carmody, T. E.	806 Metropolitan Bldg.	Keystone 5464	Denver
Carpenter, F. H.	1218 Republic Bldg.	Main 4798	Denver
Carson, P. C.	6119 Montview Blvd.	Franklin 5559	Denver
Cassidy, L. F.	393 South Downing	Spruce 5471	Denver
Cattermole, George S.	301 Majestic Bldg.	Tabor 1762	Denver
Catterson, A. D.	654 Metropolitan Bldg.	Keystone 8408	Denver
Cecchini, A. S.	100 Metropolitan Bldg.	Main 4187	Denver
Chamberlain, R. S.	300 United Securities Building	Franklin 2715	Denver
Chambers, Karl	812 Republic Bldg.	Tabor 0620	Denver
Chaney, W. C.	522 Garfield	Franklin 5065	Denver
Charles, R. L.	564 Metropolitan Bldg.	Keystone 7023	Denver
Chase, J. S.	821 Republic Bldg.	Main 5284	Denver
Cheley, G. E.	203 Metropolitan Bldg.	Main 4002	Denver
Childs, S. B.	142 Metropolitan Bldg.	Tabor 5141	Denver
Chisholm, A. J.	232 Metropolitan Bldg.	Tabor 0477	Denver
Chouke, K. S.	4200 E. 9th Ave.	York 8500	Denver
Clark, Dumont	330 Republic Bldg.	Tabor 1053	Denver
Cleere, Roy L.	1134 Republic Building	Keystone 2522	Denver
Cobianchi, P. L.	333 E. 16th Ave.	Main 1901	Denver
Cohen, Haskell M.	709 Republic Bldg.	Main 5820	Denver
Coleman, Oscar E.	307 Majestic Bldg.	Keystone 7020	Denver
Collins, E. W.	508 Majestic Bldg.	Main 2555	Denver
Connell, J. E. A.	764 Metropolitan Bldg.	Keystone 5784	Denver
Connor, P. J.	1123 Republic Bldg.	Tabor 2341	Denver
Conyers, C. A.	306 Republic Bldg.	Keystone 8563	Denver
Cooper, C. E.	652 Metropolitan Bldg.	Main 2922	Denver
Cooper, Clyde J.	226 Metropolitan Bldg.	Tabor 0477	Denver
Cooper, H. L.	412 Republic Bldg.	Keystone 5838	Denver
Cooper, Henry S.	610 Metropolitan Bldg.	Tabor 2857	Denver
Cooper, Horace S.	234 Mack Bldg.	Tabor 2541	Denver
Cooper, K. G.	652 Metropolitan Bldg.	Main 2922	Denver
Corper, H. J.	3800 E. Colfax Ave.	York 5410	Denver
Cotton, G. K.	418 Republic Bldg.	Keystone 5289	Denver
Craig, Alexander C.	122 E. 16th Ave.	Keystone 2429	Denver
Crisp, W. H.	530 Metropolitan Bldg.	Tabor 3719	Denver
Crosby, L. G.	142 Metropolitan Bldg.	Tabor 5141	Denver
Cunningham, T. D.	932 Republic Bldg.	Main 3470	Denver
Curigan, Martin D.	610 Metropolitan Bldg.	Tabor 2857	Denver
Curtis, H. B.	203 Cooper Bldg.	Main 5463	Denver
Daniels, L. E.	924 Republic Bldg.	Keystone 5037	Denver
Danielson, Ralph W.	258 Metropolitan Bldg.	Main 2332	Denver
Darley, Ward	518 Majestic Bldg.	Tabor 0914	Denver
Darrow, C. H.	110 Metropolitan Bldg.	Main 4133	Denver
Davis, Jefferson C. W.	3805 Lowell Blvd.	Gallup 2591	Denver
Davis, J. B.	664 Metropolitan Bldg.	Keystone 6061	Denver
Dean, E. F.	506 Metropolitan Bldg.	Main 5609	Denver
Delehanty, E. S.	235 Majestic Bldg.	Keystone 2916	Denver
Denman, A. C.	717 Republic Bldg.	Main 4002	Denver
Dennis, W. S.	412 Republic Bldg.	Keystone 1555	Denver
Dickson, Logan M.	1565 Pearl St.	Keystone 9525	Denver
Dickson, R. W.	915 Republic Bldg.	Tabor 2629	Denver
Diemer, F. E.	813 Republic Bldg.	Keystone 1073	Denver
Dixon, Robert K.	1104 Republic Bldg.	Keystone 8898	Denver
Dobos, E. I.	St. Joseph's Hospital	Franklin 3772	Denver

DENVER (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Dorsey, G. H.	946 Metropolitan Bldg.	Main 2232	Denver
Doty, D. A.	738 Metropolitan Bldg.	Tabor 2265	Denver
Douglass, A. L.	306 Mack Bldg.	Tabor 3444	Denver
Downing, E. D.	2636 Albion Street	York 7988-M	El Paso
Dreyer, J. Henry	309 Mack Bldg.	Keystone 5445	Denver
Dumm, B. I.	415 Majestic Bldg.	Main 0424	Denver
Dwyer, Paul K.	830 Metropolitan Bldg.	Main 3508	San Luis Valley
Durbin, Edgar	550 Metropolitan Bldg.	Tabor 5428	Denver
Earley, A. H.	1204 Republic Bldg.	Keystone 0680	Denver
Eastlake, A. C.	816 Republic Bldg.	Main 5761	Denver
Ebaugh, Franklin G.	4203 E. 9th Ave.	York 8500	Denver
Edwards, G. M.	732 Republic Bldg.	Tabor 0013	Denver
Ehrenburg, G. E.	J. C. R. S.	Keystone 3161	Denver
Elder, C. S.	802 Majestic Bldg.	Tabor 8515	Denver
Elliot, H. R.	330 Metropolitan Bldg.	Tabor 4802	Denver
Elrick, Leroy	816 Republic Bldg.	Keystone 7411	Denver
Enos, Clinton	831 Majestic Bldg.	Main 1633	Denver
Esserman, A. L.	1035 Republic Bldg.	Tabor 0052	Denver
Evans, F. J.	414 Mack Bldg.	Tabor 7538	Denver
Evans, John R.	620 Republic Bldg.	Tabor 8531	Denver
Faber, E. G.	224 Republic Bldg.	Main 2235	Denver
Faust, L. S.	1104 Republic Bldg.	Keystone 8898	Denver
Filmer, B. A.	1331 S. Marion	(Disc.) Res. Pearl 8486	Denver
Finney, H. S.	1236 Republic Bldg.	Tabor 0626	Denver
Finnoff, Wm. C.	920 Republic Bldg.	Keystone 4980	Denver
Fisher, C. D.	633 Mack Bldg.	Keystone 0878	Denver
Forbes, Roy P.	1859 Gilpin St.	Franklin 4772	Denver
Foster, John M.	738 Metropolitan Bldg.	Tabor 2248	Denver
Foster, J. M., Jr.	504 Republic Bldg.	Keystone 0294	Denver
Fowler, H. L.	425 Mack Bldg.	Tabor 3063	Denver
Fowler, O. S.	302 Metropolitan Bldg.	Tabor 3663	Denver
Frank, L. W.	610 Republic Bldg.	Main 5853	Denver
Fraser, M. E. V.	737 Republic Bldg.	Tabor 2672	Denver
Fraser, R. W.	536 Majestic Bldg.	Keystone 0846	Denver
Freeland, H. J.	516 Republic Bldg.	Tabor 4562	Denver
Freeman, Leonard	424 Metropolitan Bldg.	Keystone 5617	Denver
Freeman, Leonard, Jr.	424 Metropolitan Bldg.	Keystone 5617	Denver
Freshman, A. W.	234 Metropolitan Bldg.	Main 2954	Denver
Friedman, Emanuel	326 Republic Bldg.	Main 1943	Denver
Friesch, Wenzel	625 Republic Bldg.	Main 6829	Denver
Frumess, G. M.	332 Republic Bldg.	Main 6777	Denver
Gale, M. J.	737 Republic Bldg.	Tabor 2672	Denver
Gallaher, T. J.	605 California Bldg.	Keystone 0628	Denver
Garwood, H. G.	521 Majestic Bldg.	Tabor 0738	Denver
Gauss, Harry	535 Republic Bldg.	Tabor 5723	Denver
Gelien, Johanna	1480 High St.	Franklin 6124	Denver
Gengenbach, F. P.	1850 Gilpin St.	Franklin 4772	Denver
George, McLeod M.	Bethesda Sanitarium	Pearl 5033	Denver
Gillen, G. H.	1337 Gaylord St.	York 3716	Denver
Ginsburg, M. M.	624 Metropolitan Bldg.	Tabor 0181	Denver
Glenn, G. A.	4200 Tejon St.	Gallup 4500	Denver
Goldhammer, Samuel S.	615 Republic Bldg.	Main 4695	Denver
Golding, Frank C.	4200 E. 9th Avenue	York 8500	Denver
Graham, D. A.	323 Mack Bldg.	Main 0614	Denver
Graham, E. V.	1205 Republic Bldg.	Tabor 2456	Denver
Green, L. W.	1237 Republic Bldg.	Keystone 8600	Denver
Greig, William M.	415 Majestic Bldg.	Main 0424	Denver
Guthrie, A. B.	318 Republic Bldg.	Tabor 1631	Denver
Guthrie, E. C.	404 Steele Bldg.	Keystone 5661	Denver
Gwinn, Lawrence M.	1005 So. Gaylord St.	Spruce 1249	Denver
Haggart, William W.	1003 Republic Bldg.	Tabor 1418	Denver
Hall, J. N.	730 Metropolitan Bldg.	Keystone 6650	Denver
Halley, William H.	220 Metropolitan Bldg.	Tabor 6715	Denver
Halsted, F. S.	738 Metropolitan Bldg.	Tabor 2248	Denver
Hansen, F. P.	506 Mack Bldg.	Tabor 5915	Denver
Hargreaves, O. C.	3700 W. 32nd Ave.	Gallup 2210	Denver
Harrington, John F.	1227 Republic Bldg.	Main 4449	Denver
Hartendorp, Paulus V. H.	500 Broadway National Bank Bldg.	Spruce 4142	Denver
Hartley, J. E.	1224 Republic Bldg.	Tabor 1224	Denver
Harvey, E. L.	632 Republic Bldg.	Tabor 5366	Denver
Harvey, H. G., Jr.	632 Republic Bldg.	Tabor 5366	Denver
Hazlett, J. D.	604 Republic Bldg.	Keystone 0108	Denver
Hegner, C. F.	920 Metropolitan Bldg.	Keystone 7913	Denver
Henderson, H. B.	509 Republic Bldg.	Main 5191	Denver

DENVER (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Hepp, G. B.	521 Mack Bldg.	Keystone 0677	Denver
Hepp, Louis C.	521 Mack Bldg.	Keystone 0677	Denver
Heusinkveld, Gerrit	620 Republic Bldg.	Tabor 8531	Denver
Hickey, H. L.	934 Republic Bldg.	Keystone 1742	Denver
Higbee, D. R.	1117 Republic Bldg.	Tabor 8311	Denver
Hill, K. A.	632 Metropolitan Bldg.	Main 2340	Denver
Hillkowitz, Philip	236 Metropolitan Bldg.	Main 2954	Denver
Hilton, Jack Palmer	Mount Airy Sanitarium	York 0849	Denver
Hinton, C. B.	104 Broadway	Spruce 0995	Denver
Hix, I. E.	1138 Republic Bldg.	Keystone 8421	Denver
Holden, G. W.	606 Metropolitan Bldg.	Keystone 0473	Denver
Holt, Frank	1010 Republic Bldg.	Main 1486	Denver
Hopkins, H. J.	3211 Lowell Blvd.	Gallup 7360	Denver
Hopkins, J. R.	907 Republic Bldg.	Main 2755	Denver
Hopkins, T. M.	520 Metropolitan Bldg.	Tabor 2553	Denver
Howard, J. F.	2400 Gaylord St.	Franklin 1801	Denver
Howard, T. Leon	1224 Republic Bldg.	Tabor 1224	Denver
Hoyt, R. W.	404 Republic Bldg.	Keystone 5517	Denver
Hudston, Ranulph	1203 Republic Bldg.	Main 1381	Denver
Hutchison, James E.	216 Republic Bldg.	Keystone 1624	Denver
Hutton, J. G.	506 Republic Bldg.	Tabor 5625	Denver
Imbro, Eva Arbini	4656 Gilpin Street	Tabor 5591	Denver
Inglis, John	837 Republic Bldg.	Main 5524	Denver
Ingraham, C. B.	509 Republic Bldg.	Main 5191	Denver
Irwin, R. S.	714 Republic Bldg.	Main 5515	Denver
Jackson, Edward	1008 Republic Bldg.	Keystone 7517	Denver
Jaeger, J. R.	632 Republic Bldg.	Tabor 5366	Denver
Jaffa, B. B.	358 Metropolitan Bldg.	Tabor 6715	Denver
Jelstrup, Gunnar	516 Republic Bldg.	Keystone 0409	Denver
Jeurink, John	1620 So. Pearl St.	Spruce 6058	Denver
Jeurink, V. G.	527 Republic Bldg.	Main 3938	Denver
Jobe, M. C.	606 Metropolitan Bldg.	Main 4543	Denver
John, G. H.	560 Metropolitan Bldg.	Keystone 7023	Denver
Jones, V. H.	322 Republic Bldg.	Tabor 4041	Denver
Jones, Wiley	735 Majestic Bldg.	Keystone 2601	Denver
Katzman, Maurice	402 Republic Bldg.	Keystone 0411	Denver
Kemper, C. F.	930 Metropolitan Bldg.	Main 3661	Denver
Kennedy, A. L.	835 Gaylord St.	York 7033	Denver
Kenney, F. W.	Capitol Life Bldg.	Keystone 2211	Denver
Kent, G. B.	516 Republic Bldg.	Main 2646	Denver
Kent, W. C.	1069 Cook St.	York 4189	Denver
Kestle, C. W.	122 E. 16th Avenue	Keystone 2429	Denver
King, W. W.	738 Metropolitan Bldg.	Tabor 2265	Denver
Kinney, J. E.	606 Metropolitan Bldg.	Keystone 0473	Denver
Knoch, N. H.	523 Majestic Bldg.	Keystone 3431	Denver
Kracaw, A. R.	735 Monroe St.	Keystone 1003	Denver
Kretschmer, O. S.	306 Republic Bldg.	Keystone 8563	Denver
Krohn, Morris J.	406 Central Savings Bank Bldg.	Keystone 8517	Denver
Krueger, E. H.	2100 E. 28th Ave.	York 3445	Denver
Kruse, May B.	945 Washington St.	York 0409	Denver
Kunitoma, N.	830 18th St.	Tabor 1983	Denver
Laff, Herman I.	406 Metropolitan Bldg.	Keystone 1908	Denver
Lamberton, R. F.	314 Mack Bldg.	Keystone 2548	Denver
Lang, Ray R.	229 Commonwealth Bldg.	Keystone 2436	Denver
Lannon, A. R.	632 Republic Bldg.	Tabor 5366	Denver
Lee, G. H.	330 Metropolitan Bldg.	Keystone 4323	Denver
Lee, L. W.	732 Republic Bldg.	Tabor 7816	Denver
LeFevre, H. W., Jr.	816 Republic Bldg.	Keystone 7411	Denver
LeRossignol, W. J.	686 So. Pearl St.	Pearl 0933	Denver
Levin, O. S.	300 United Securities Building	Franklin 2715	Denver
Levy, Maurice	709 Republic Bldg.	Main 0633	Denver
Levy, Robert	406 Metropolitan Bldg.	Keystone 1908	Denver
Lewis, George B.	856 Metropolitan Bldg.	Tabor 5788	Denver
Lewis, Robert	230 Majestic Bldg.	Tabor 3890	Denver
Lewis, W. B.	3268 W. 32nd Ave.	Gallup 0224	Denver
Leyda, J. H.	956 Metropolitan Bldg.	Keystone 3768	Denver
Lincoln, C. L.	301 Majestic Bldg.	Tabor 1762	Denver
Lingenfelter, G. P.	646 Metropolitan Bldg.	Keystone 6431	Denver
Lipscomb, John M.	1224 Republic Bldg.	Tabor 1224	Denver
Lof, A. J. O.	836 Metropolitan Bldg.	Keystone 4000	Denver
Long, Margaret	940 Metropolitan Bldg.	Keystone 2661	Denver
Lorber, M. B.	636 Republic Bldg.	Tabor 4289	Denver
Love, T. R.	302 Metropolitan Bldg.	Keystone 0335	Denver

DENVER (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Lowen, C. J.	717 Republic Bldg.	Main 2331	Denver
Lowther, R. R.	945 Washington St.	Franklin 2967	Denver
Macomber, D. W.	532 Republic Bldg.	Main 2046	Denver
Macomber, H. G.	1415 Welton St.	Keystone 7733	Denver
Maier, Frank Julian	1123 Republic Bldg.	Tabor 2341	Denver
Main, George C.	227 Mack Bldg.	Keystone 5341	Denver
Manns, Rudolph	722 Republic Bldg.	Keystone 7001	Denver
Marcove, M. E.	526 Republic Bldg.	Main 5416	Denver
Markel, Casper	631 Majestic Bldg.	Main 4942	Denver
Markley, A. J.	432 Metropolitan Bldg.	Keystone 2829	Denver
Mason, Lyman W.	707 Republic Bldg.	Main 2344	Denver
Maul, H. G.	227 Mack Bldg.	Keystone 5341	Denver
Maul, R. F.	227 Mack Bldg.	Keystone 5341	Denver
McCaw, John A.	415 Majestic Bldg.	Tabor 3800	Denver
McDonald, R. J.	626 Republic Bldg.	Tabor 7747	Denver
McGraw, H. R.	416 Metropolitan Bldg.	Keystone 3934	Denver
McKeen, H. R.	532 Republic Bldg.	Keystone 7610	Denver
McKelvey, S. R.	State Office Bldg.	Keystone 1171	Denver
McKeown, E. E.	406 Republic Bldg.	Keystone 8231	Denver
McLauthlin, C. A.	532 Republic Bldg.	Tabor 1067	Denver
McNaught, F. H.	519 Majestic Bldg.	Keystone 2921	Denver
Meade, E. E.	527 Mack Bldg.	Main 1658	Denver
Meador, C. N.	518 Majestic Bldg.	Tabor 0914	Denver
Metcalfe, A. W., Jr.	820 Metropolitan Bldg.	Keystone 3124	Denver
Metz, C. W.	1134 Republic Bldg.	Keystone 2522	Denver
Miel, G. W.	824 Majestic Bldg.	Keystone 0420	Denver
Miller, A. H.	340 Metropolitan Bldg.	Tabor 2803	Denver
Miller, Eli A.	266 Metropolitan Bldg.	Tabor 4289	Denver
Miller, L. I.	266 Metropolitan Bldg.	Tabor 4289	Denver
Miller, Simon I.	1024 Republic Bldg.	Tabor 8614	Denver
Mills, F. McConnell	50 So. Clarkson	Pearl 0012	Denver
Minnig, Arnold	522 Republic Bldg.	Keystone 1571	Denver
Mitchell, W. C.	430 State Office Bldg.	Keystone 1171	Denver
Mogan, W. E.	423 Republic Bldg.	Main 1847	Denver
Monaghan, D. G.	535 Majestic Bldg.	Main 0706	Denver
Monson, G. L.	846 Metropolitan Bldg.	Tabor 0825	Denver
Moon, A. L.	2525 So. Downing St.	Pearl 3721	Denver
Morian, C. H.	510 Mack Bldg.	Tabor 2473	Denver
Morning, J. F.	416 Mack Bldg.	Keystone 5531	Denver
Morrison, R. G.	724 Metropolitan Bldg.	Main 3747	Denver
Mugrage, E. R.	4200 E. 9th Ave.	York 8500	Denver
Mumey, Nolie	1133 Republic Bldg.	Keystone 3600	Denver
Murphy, Rex L.	110 Metropolitan Bldg.	Main 4133	Denver
Nelson, Eli	830 Metropolitan Bldg.	Main 3508	Denver
Ness, R. J.	354 Metropolitan Bldg.	Keystone 4472	Denver
Newcomer, Elizabeth H.	306 Republic Bldg.	Keystone 8563	Denver
Newcomer, N. B.	306 Republic Bldg.	Keystone 8563	Denver
Newman, Samuel P.	1707 E. 18th Ave.	York 7720	Denver
Newsom, H. G.	227 Mack Bldg.	Keystone 5341	Denver
Ohmart, W. A.	214 Republic Bldg.	Main 6941	Denver
Olmsted, G. K.	505 Republic Bldg.	Main 3014	Denver
Oppenheim, S. M.	312 Metropolitan Bldg.	Tabor 0781	Denver
O'Rourke, D. H.	1120 Republic Bldg.	Keystone 8315	Denver
Orsborn, G. E.	428 Majestic Bldg.	Main 0971	Denver
Packard, George B.	764 Metropolitan Bldg.	Keystone 5784	Denver
Packard, Robert G.	1707 E. 18th Ave.	York 7720	Denver
Pate, C. E.	520 Metropolitan Bldg.	Keystone 1839	Denver
Pattee, George L.	612 Republic Bldg.	Main 7069	Denver
Peck, G. S.	226 Majestic Bldg.	Keystone 6511	Denver
Perkins, C. C.	907 Republic Bldg.	Keystone 6712	Denver
Perkins, Earl J.	958 Metropolitan Bldg.	Keystone 4637	Denver
Perrin, J. B.	730 Metropolitan Bldg.	Keystone 8083	Denver
Perrott, E. W.	1024 Republic Bldg.	Keystone 6084	Denver
Perry, R. B.	637 Republic Bldg.	Keystone 0343	Denver
Pershing, Howell T.	706 Metropolitan Bldg.	Keystone 2022	Denver
Phillips, Samuel Grover	529 Majestic Bldg.	Main 0458	Denver
Philpott, Ivan W.	920 Metropolitan Bldg.	Keystone 5304	Denver
Philpott, J. A.	202 Metropolitan Bldg.	Tabor 2985	Denver
Philpott, O. S.	432 Metropolitan Bldg.	Keystone 2829	Denver
Plaughter, Lee Roy	1025 Sherman St.	Main 6488	Garfield
Pollard, J. W.	1217 Republic Bldg.	Main 3801	Denver
Pollock, C. R.	704 Republic Bldg.	Tabor 7516	Denver
Porter, W. C.	1120 Republic Bldg.	Tabor 8610	Denver
Postma, George S.	1590 So. Pearl St.	Spruce 3044	Denver

DENVER (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Pothuisje, P. J.	638 Majestic Bldg.	Main 3539	Denver
Potter, S. B.	220 Republic Bldg.	Tabor 6715	Denver
Powell, Cuthbert	1578 Humboldt St.	York 2343	Denver
Pratt, E. S.	737 Republic Bldg.	Tabor 2672	Denver
Prey, Duval	504 Republic Bldg.	Keystone 0294	Denver
Price, Craig	100 Metropolitan Bldg.	Main 4187	Denver
Prinzling, J. F.	717 Republic Bldg.	Keystone 5713	Denver
Purcell, J. W.	3788 Walnut St.	Keystone 6911	Denver
Ramsey, R. T.	566 Metropolitan Bldg.	Main 4619	Denver
Rees, Maurice H.	2810 E. 17th Ave.	Res. Franklin 0891	Denver
Reilly, J. J.	1931 Eudora St.	York 5740	Denver
Reynolds, Edna M.	920 Republic Bldg.	Keystone 4980	Denver
Richards, D. F.	804 Republic Bldg.	Tabor 4761	Denver
Rilance, C. D.	904 Republic Bldg.	Keystone 6429	Denver
Ritterspach, F. J.	820 Metropolitan Bldg.	Keystone 3124	Denver
Robb, William J.	509 Insurance Bldg.	Main 1422	Denver
Robinson, E. F.	734 Republic Building	Main 5945	Denver
Roe, J. F.	504 Equitable Bldg.	Tabor 1162	Denver
Rogers, F. E.	802 Majestic Bldg.	Tabor 8515	Denver
Rethtwell, W. D.	438 Republic Bldg.	Tabor 3981	Denver
Ruddy, James	404 Republic Bldg.	Tabor 6038	Denver
Ruegnitz, L. H.	1717 Downing St.	Tabor 5369	Denver
Russell, James E.	820 Metropolitan Bldg.	Keystone 3792	Denver
Ryan, J. G.	725 Mack Bldg.	Main 0834	Denver
Safarik, L. R.	1017 Republic Bldg.	Keystone 8507	Denver
Saks, H. S.	312 17th St.	Main 6884	Denver
Sams, L. V.	1010 Republic Bldg.	Main 1486	Denver
Savage, Raymond J.	635 Republic Bldg.	Tabor 1819	Denver
Sawyer, K. C.	516 Republic Building	Main 2646	Denver
Scherrer, E. A.	216 Republic Bldg.	Keystone 1624	Denver
Schmidt, E. A.	1040 Jackson St.	York 6837R	Denver
Schoonover, J. A.	610 Republic Bldg.	Tabor 5514	Denver
Schroeder, R. H.	756 Metropolitan Bldg.	Tabor 6776	Denver
Schwatt, Herman	J. C. R. S.	Keystone 3161	Denver
Searle, Hester B.	1415 Welton St.	Keystone 7733	Denver
Scars, Thad P.	Medical Dept. Denver Tramway Co.	Main 5111	Denver
Sedwick, W. A.	835 Republic Bldg.	Tabor 1941	Denver
Seebass, A. R.	509 Insurance Bldg.	Main 1422	Denver
Sells, V. E.	2239 E. Colfax	Franklin 2715	Denver
Sevier, C. E.	418 Republic Bldg.	Keystone 5289	Denver
Sewall, Henry	1360 Vine St.	York 1474	Denver
Seyler, Anna G.	322 Republic Bldg.	Tabor 4041	Denver
Shea, R. M.	1244 Grant St.	Keystone 0354	Denver
Shields, J. M.	262 Metropolitan Bldg.	Tabor 4594	Denver
Shollenberger, C. F.	2836 Federal Blvd.	Gallup 1730R	Denver
Simon, S.	1218 Republic Bldg.	Keystone 3417	Denver
Sims, Harry J.	25 E. Iowa Ave.	Pearl 0211	Denver
Smith, Charles	509 Republic Bldg.	Main 5191	Denver
Smith, Guy W.	806 Metropolitan Bldg.	Keystone 5464	Denver
Smith, R. G.	506 Metropolitan Bldg.	Main 0738	Denver
Snyder, H. W.	832 Republic Bldg.	Tabor 6309	Denver
Sommer, H. O.	Y. M. C. A.	Keystone 8251	Denver
Spangelberger, M. A.	604 Republic Bldg.	Keystone 0108	Denver
Spicer, C. M.	1106 Republic Bldg.	Keystone 2571	Denver
Staeck, F. C.	2257 W. 32nd Ave.	Gallup 1155	Denver
Stahl, A. W.	1778 Gilpin St.	York 9064	Denver
Stander, T. C.	832 Republic Bldg.	Tabor 6309	Denver
Stander, T. R.	613 Republic Bldg.	Main 4825	Denver
Staunton, A. G.	835 Republic Bldg.	Tabor 1941	Denver
Stein, Herman B.	310 Republic Bldg.	Main 1553	Denver
Stephenson, F. B.	452 Metropolitan Bldg.	Tabor 4208	Denver
Stevens, J. L.	66 Knox Ct.	Spruce 8920	Denver
Strickler, D. A.	1520 York St.	York 1693	Denver
Struthers, J. E.	904 Republic Bldg.	Main 0813	Denver
Stuver, H. W.	324 Majestic Bldg.	Main 1968	Denver
Sunderland, W. E.	705 Republic Bldg.	Main 0560	Denver
Swaggart, Luman B.	27 E. 1st Ave.	Pearl 7679	Denver
Swerdfeger, E. B.	1763 Gilpin St.	York 3300	Denver
Swigert, J. L.	1102 Republic Bldg.	Main 6509	Denver
Taylor, H. L.	415 Majestic Bldg.	Main 0424	Denver
Tepley, Leo V.	804 Republic Bldg.	Tabor 2008	Denver
Thayer, M. D.	527 Majestic Bldg.	Tabor 2766	Denver
Thomas, Atha	418 Republic Bldg.	Keystone 5289	Denver
Thompson, N. A.	946 Metropolitan Bldg.	Main 2232	Denver

DENVER (Continued)

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Thulin, H. F.	104 Broadway	Spruce 0995	Denver
Tower, F. A.	302 Quincy Bldg.	Keystone 2444	Denver
Townsend, Guy W.	556 Metropolitan Bldg.	Main 2755	Denver
Troute, F. R.	1290 So. High St.	Pearl 3453	Denver
Trumbauer, C. A.	3409 York St.	York 5490	Denver
Ulmer, H. D.	407 Mack Bldg.	Tabor 6632	Denver
Van Meter, L. M.	834 Republic Bldg.	Tabor 7978	Denver
Van Meter, S. D.	1621 Court Pl.	Main 1897	Denver
Van Meter, Virginia C.	1621 Court Pl.	Main 1897	Denver
Van Stone, L. M.	203 Metropolitan Bldg.	Main 1002	Denver
Van Stone, W. D.	1578 Humboldt St.	York 2343	Denver
Van Zant, C. B.	460 Metropolitan Bldg.	Keystone 7463	Denver
Verploeg, Ralph H.	1850 Gilpin St.	Franklin 4772	Denver
Von Detten, H. J.	1578 Humboldt St.	York 2343	Denver
Wade, L. H.	817 Majestic Bldg.	Keystone 7623	Denver
Waggener, W. R.	220 Metropolitan Bldg.	Main 0351	Denver
Walker, Chas. E.	517 Jacobson Bldg.	Tabor 7665	Denver
Wallace, G. C.	910 Republic Bldg.	Keystone 8037	Denver
Waring, James J.	203 Metropolitan Bldg.	Main 1002	Denver
Warner, G. R.	1206 Republic Bldg.	Keystone 5124	Denver
Wasson, W. W.	246 Metropolitan Bldg.	Tabor 3037	Denver
Waters, P. A.	309 Federal Building	Keystone 4151	Denver
Wear, Harry H.	915 Republic Bldg.	Tabor 8311	Denver
Weatherford, J. E.	300 United Securities Bldg.	Franklin 2715	Denver
Weiner Morris	1035 Republic Bldg.	Tabor 6817	Denver
Weinstein, Sidney S.	83 So. Broadway	Pearl 7958	Denver
Weiss, F. H.	1449 Pennsylvania St.	Keystone 0996	Denver
Whitaker, H. L.	1234 Republic Bldg.	Main 2759	Denver
Whitaker, W. O.	1235 Republic Bldg.	Tabor 0626	Denver
Whitehead, R. W.	4200 E. 9th Ave.	York 8500	Denver
Whiteley, P. W.	818 Metropolitan Bldg.	Tabor 6063	Denver
Wilcox, H. W.	924 Republic Bldg.	Keystone 3538	Denver
Williams, G. Z.	456 Metropolitan Bldg.	Tabor 1671	Denver
Williams, Sherman	346 Metropolitan Bldg.	Main 1506	Denver
Williams, William Whittridge	503 Majestic Bldg.	Tabor 4312	Denver
Willis, C. H.	307 Railway Exchange Bldg.	Tabor 8418	Denver
Wilson, A. Lawrence	606 Metropolitan Bldg.	Main 4543	Denver
Wilson, R. E.	1008 Republic Bldg.	Tabor 8324	Denver
Winemiller, L. H.	404 Republic Bldg.	Keystone 4812	Denver
Withers, Sanford M.	304 Republic Bldg.	Keystone 8633	Denver
Wolf, J. A.	310 Republic Bldg.	Tabor 1416	Denver
Wolfe, A. M.	636 Republic Bldg.	Main 3470	Denver
Wollenweber, L. C.	808 Republic Bldg.	Keystone 8443	Denver
Wollgast, Geo. F.	1448 So. Broadway	Spruce 5118	Denver
Woodcock, W. C.	315 Emerson St.	Pearl 8464	Denver
Work, Hubert	521 Brown Palace Hotel	Tabor 6692	Pueblo
Work, Philip	324 Metropolitan Bldg.	Keystone 8333	Denver
Workman, Cloyd W.	1078 So. Gaylord St.	Pearl 6690	Denver
Worthington, A. K.	1554 California St.		Denver
Wright, G. M.	331 Mack Bldg.	Main 2426	Denver
Yegge, W. B.	436 Metropolitan Bldg.	Main 1346	Denver
Yont, Kate E. G.	Box 163, Highlands Station	Gallup 4649	Denver
Young, H. B.	330 Republic Bldg.	Tabor 1062	Denver
Zarit, John I.	266 Metropolitan Bldg.	Tabor 4289	Denver
Zimmerman, William	509 Mack Bldg.	Keystone 4837	Denver

DOLORES, COLORADO

Lefurgey, H. C.	Dolores	Dolores 44	San Juan
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DURANGO, COLORADO

Burnett, A. L.	Kruschke Bldg.	Durango 212	San Juan
Darling, J. C.	Century Bldg.	Durango 60	San Juan
Elliott, W. M.	946 Main	Durango 322	San Juan
Downing, R. L.	126 W. 9th St.	Durango 161	San Juan
Haggart, John	Century Bldg.	Durango 330J	San Juan
Lingenfelter, H. A.	102 E. 8th St.	Durango 203	San Juan
Rensch, O. B.	Century Bldg.	Durango 441	San Juan

EADS, COLORADO

Mitchell, Lee Roy	Eads	Eads 22	Prowers
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EAGLE

Hotopp, T. M. H.	Eagle	Eagle 48 F. 2	Garfield
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EATON, COLORADO

Name	Address	Telephone	Society
Corbin, E. A.	Eaton	Eaton 6	Weld
Hall, A. Z.	Eaton	Eaton 135	Weld
Holden, E. G.	Eaton	Eaton 27	Weld
Rupert, H. S.	Eaton	Eaton 123	Weld

EDGEWATER, COLORADO

Bailey, George P.	1393 Sheridan Boulevard	Lakewood 314	Denver
Sunderland, O. R.	2503 Benton St.	Gallup 2796	Denver

ELBERT, COLORADO

Denney, R. H.	Elbert	Elbert 242	Denver
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ENGLEWOOD, COLORADO

Aldredge, H. H.	3503 So. Broadway	Englewood 7W	Denver
Isbell, N. Paul	3176 So. Acoma Street	Englewood 7W	Denver
Simon, John	3345 So. Broadway	Englewood 192W	Arapahoe

ERIE, COLORADO

Bixler, C. W.	Erie	Erie 22-R1	Boulder
Cooke, M. W.	Box 192	Erie 22-R1	Boulder

ESTES PARK, COLORADO

Battock, Benjamin H.	Estes Park		Denver
Mall, Jacob O.	Estes Park	Estes Park 78	Larimer
Weist, Roy F.	Estes Park	Estes Park 41	Larimer

EVANS, COLORADO

Averill, H. W.	Evans	Evans 44-F1	Weld
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EVERGREEN, COLORADO

Mason, George E.	Box 22, Evergreen		Denver
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FAIRPLAY, COLORADO

Burlingame, Robert M.	Fairplay	Fairplay 34	Denver
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FLAGLER, COLORADO

Reid, E. W.	Flagler	Flagler 82	Kit Carson
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FLORENCE, COLORADO

Adkinson, Royal C.	Blunt Bldg.	Florence 128	Fremont
Hutton, Vardry A.	Blunt Bldg.	Florence 152	Fremont
Rupert, L. E.	119 E. 2nd St.	Florence 16	Fremont
Waroshill, A. D.	Daniels Blk.	Florence 218	Fremont

FORT COLLINS, COLORADO

Beebe, N. L.	Robertson Bldg.	Ft. Collins 343W	Larimer
Brown, Thad C.	Albert Bldg.	Ft. Collins 170W	Larimer
Brownell, W. F.	Colorado Bldg.	Ft. Collins 219W	Larimer
Carey, J. D.	Poudre Valley National Bank Bldg.	Ft. Collins 204	Larimer
Carroll, Frank	Robertson Bldg.	Ft. Collins 2041W	Larimer
Cram, Victor E.	Physicians Bldg.	Ft. Collins 1048W	Larimer
Dickey, L. D.	210 Colorado Bldg.	Ft. Collins 395W	Larimer
Garrison, G. E.	Robertson Building	Fort Collins 219W	Larimer
Gleason, R. L.	Robertson Bldg.	Ft. Collins 440W	Larimer
Halley, S. C.	Colorado Bldg.	Ft. Collins 323	Larimer
Hartshorn, Daune F.	Physicians Bldg.	Ft. Collins 321W	Larimer
Hartshorn, F. H.	Physicians Bldg.	Ft. Collins 321W	Larimer
Haughey, I. W.	203 Trimble Bldg.	Ft. Collins 263W	Larimer
Honstein, C. E.	Wilson Bldg.	Ft. Collins 101W	Larimer
Humphrey, F. A.	Trimble Bldg.	Ft. Collins 560W	Larimer
Lee, Robert M.	Physicians Building	Fort Collins 460W	Larimer
Little, Lowell	Colorado Bldg.	Ft. Collins 669W	Larimer
McHugh, P. J.	P. O. Box 194	Ft. Collins 50W	Larimer
Morrill, E. L.	633 Remington St.	Ft. Collins 187	Larimer
Platz, C. H.	Colorado Bldg.	Ft. Collins 889W	Larimer
Taylor, T. Clarkson	Physicians Bldg.	Ft. Collins 400	Larimer

FORT LUPTON, COLORADO

Monismith, A. T.	Fort Lupton	Ft. Lupton 6J	Weld
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FORT LYON, COLORADO

Bondurant, Alphaeus J.	Fort Lyon	Las Animas 82	Otero
Cassidy, F. C.	Fort Lyon	Las Animas 82	Otero
Fulwider, Robert M.	Fort Lyon	Las Animas 82	Otero & Denver
Jackson, B. F.	Fort Lyon	Las Animas 82	Otero

FORT MORGAN, COLORADO

Name	Address	Telephone	Society
Clark, I. J.	Box 577	Ft. Morgan 499	Morgan
Johnson, Harry A.	Morgan County Bank Bldg.	Ft. Morgan 37W	Morgan
Lockwood, F. W.	First National Bank Bldg.	Ft. Morgan 137	Morgan
Williams, A. F.	220 E. Beaver Ave.	Ft. Morgan 18	Morgan
Woodward, Paul E.	220 E. Beaver Ave.	Ft. Morgan 18	Morgan

FOWLER, COLORADO

Van Der Schouw, G. E.	Fowler	Fowler 50W	Otero
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FREDERICK, COLORADO

McCabe, F. G.	Frederick	Frederick 42	Boulder
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FRUITA, COLORADO

Orr, James S.	Fruita	Fruita 4W	Mesa
White, H. W.	Fruita	Fruita 5W	Mesa

GILMAN, COLORADO

Nutting, B. E.	Gilman	Gilman 20J	Chaffee
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GLENWOOD SPRINGS, COLORADO

Cavanagh, J. L.	First National Bank Bldg.	Glenwood Springs 291W	Garfield
Crook, W. W.	First National Bank Bldg.	Glenwood Springs 162	Garfield
Evans, W. W.	Glenwood Springs	Glenwood Springs 162	Garfield
Hopkins, G. A.	Citizens National Bank Bldg.	Glenwood Springs 63W	Garfield
Porter, R. B.	First National Bank Bldg.	Glenwood Springs 25W	Garfield

GOLDEN, COLORADO

Garvin, D. E.	815 12th St.	Golden 68	Denver
Howlett, R. G.	Golden	Golden 99	Denver
Robinovitch, Louise G.	Golden		Denver

GRANADA, COLORADO

Thompson, Lewis N.	Granada		Prowers
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GRAND JUNCTION, COLORADO

Bull, H. R.	Canon Bldg.	Grand Junction 101	Mesa
Cary, G. C.	Canon Bldg.	Grand Junction 839	Mesa
Day, H. S.	Fair Bldg.	Grand Junction 403	Mesa
Ford, J. E.	Reed Bldg.	Grand Junction 908W	Mesa
Hansen, K.	Canon Bldg.	Grand Junction 101	Mesa
McDonough, F. J.	Grand Valley Bank Bldg.	Grand Junction 79	Mesa
Munro, E. H.	Canon Bldg.	Grand Junction 839	Mesa
Peterson, E. H.	Margery Bldg.	Grand Junction 29	Mesa
Reed, C. W.	Margery Bldg.	Grand Junction 904	Mesa
Sickenberger, J. U.	Grand Valley Bank Bldg.	Grand Junction 926	Mesa
Taylor, A. G.	Currie Bldg.	Grand Junction 333W	Mesa
Tupper, Harvey M.	26 Canon Blk.	Grand Junction 740	Mesa

GRAND VALLEY, COLORADO

Miller, Fred H.	Grand Valley	Grand Valley 33	Garfield
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GREELEY, COLORADO

Allen, W. P.	822½ 9th St.	Greeley 19	Weld
Atkinson, T. E.	Coronado Bldg.	Greeley 65	Weld
Bennell, O. E.	Greeley Union National Bank Bldg.	Greeley 163	Weld
Broman, O. F.	Greeley Bldg.	Greeley 528	Weld
Dyde, C. B.	Park Place Bldg.	Greeley 61W	Weld
Fezer, Florence	811 12th St.	Greeley 1944	Weld
Fuqua, J. W.	800½ 9th St.	Greeley 1369W	Weld
Graham, R. F.	1129 7th St.	Greeley 1515	Weld
Harmer, W. W.	Greeley Bldg.	Greeley 80W	Weld
Haskell, E. E.	Route 3, Box 95	Greeley 147	Weld
Hickman, W. E.	1522 Eighth Ave.	Greeley 1460	Weld
Knowles, E. W.	Greeley Bldg.	Greeley 69W	Weld
Lehan, J. W.	Park Place Bldg.	Greeley 28-F1	Weld
Lux, Leo L.	Greeley Bldg.	Greeley 107W	Weld
Madler, N. A.	Greeley Bldg.	Greeley 25	Weld
Mead, Ella A.	Coronado Bldg.	Greeley 91	Weld
Peppers, Tracy D.	Central Bldg.	Greeley 147	Weld
Ringle, C. A.	Coronado Bldg.	Greeley 65	Weld
Schoen, W. A.	Greeley Bldg.	Greeley 935W	Weld
Spaulding, W. F.	Greeley Bldg.	Greeley 261	Weld
Thompson, W. E.	Greelev Bldg.	Greeley 23-F1	Weld
Von-Den-Steinen, Edward	State Teachers College	Greeley 2000	Weld
Weaver, J. A.	Greeley Bldg.	Greeley 70W	Weld
Webster, W. W.	202 Greeley Building	Greeley 147	Weld
Wilmoth, T. C.	Central Bldg.	Greeley 380W	Weld
Woodcock, Burgett	Box 1376	Greeley 64J	Weld

GROVER, COLORADO

Name	Address	Telephone	Society
Levine, S. J.	Grover		Weld

GUNNISON, COLORADO

McDonough, J. P.	Gunnison	Gunison 147	Chaffee
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HAXTUN, COLORADO

Kinzie, J. W.	Haxtun	Haxtun 135-R3	Northeast
Lubchenco, Portio McKnight	McKnight Hospital	Haxtun 117R3	Northeast
McKnight, J. H.	Haxtun	Haxtun 117-R3	Northeast
Mooney, W. E.	Haxtun	Haxtun 112-R3	Northeast

HAYBRO, COLORADO

Newland, D. E.	Haybro		Northwestern
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HAYDEN, COLORADO

Whittaker, D. L.	Hayden	Hayden 61	Northwestern
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HOLLY, COLORADO

Casburn, F. E.	Holly	Holly 30W	Prowers
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HOLYOKE, COLORADO

Gardner, W. R.	Holyoke	Holyoke 6002	Northeast
Hill, H. C.	Holyoke	Holyoke 6500	Northeast
Means, F. M.	Holyoke	Holyoke 4302	Northeast

HOTCHKISS, COLORADO

Myers, James T.	Hotchkiss		Delta
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HUGO, COLORADO

Thompson, James E.	Hugo		Denver
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ILIFF, COLORADO

Houf, H. W.	Iliff	Iliff 7	Northeast
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JOHNSTOWN, COLORADO

Jones, Glenn A.	Johnstown	Johnstown 57W	Weld
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JULESBURG, COLORADO

Folsom, C. H.	Julesburg	Julesburg 17W	Northeast
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KERSEY, COLORADO

Van Landegham, F. P. N.	Kersey	Greeley Red 57-J3	Weld
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KIRK, COLORADO

Blanchard, L. W.	Kirk		Weld
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KLINE, COLORADO

Smith, C. D.	Kline	Call Long Distance	San Juan
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KREMMLING, COLORADO

Sudan, A. C.	Kremmling	Kremmling 3	Northwestern
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LAFAYETTE, COLORADO

Braden, J. M.	Lafayette	Lafayette 24W	Boulder
Porter, V. W.	Lafayette	Lafayette 63	Boulder

LA JUNTA, COLORADO

Calonge, G. E.	McNeen Bldg.	La Junta 186	Otero
Cooper, Thomas J.	Colorado Trust Bldg.	La Junta 84	Otero
Farnsworth, M. A.	La Junta	La Junta 115	Otero
Groshart, O. D.	Lamb Bldg.	La Junta 330	Otero
Hansen, A. S.	401 Smithland Ave.	La Junta 210	Otero
Johnston, R. S.	401 Smithland Ave.	La Junta 210	Otero
Morse, C. E.	McNeen Bldg.	La Junta 167	Otero
Stickles, Albert	La Junta	La Junta 2	Otero

LAMAR, COLORADO

Burnett, N. M.	Lamar	Lamar 2	Prowers
Gale, Scott A.	104 W. Olive St., Lamar	Lamar 188W	Prowers
Knuckey, Clyde T.	200½ So. Main St.	Lamar 92W	Prowers
Likes, L. E.	Lamar	Lamar 305W	Prowers
Rummell, R. J.	200½ So. Main St.	Lamar 74W	Prowers

LA SALLE, COLORADO

Name	Address	Telephone	Society
Wilkinson, W. L.	La Salle	La Salle 18	Weld

LAS ANIMAS, COLORADO

Gaines, Joseph R.	Las Animas	Las Animas 348	Otero
Hagerman, S. V.	Las Animas	Las Animas 9	Otero

LA VETA, COLORADO

Lee, P. A.	La Veta	La Veta 18	Huerfano
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LEADVILLE, COLORADO

Condon, Charles E.	Leadville	Leadville 10	Lake
McDonald, Franklin J.	Leadville	Leadville 121	Lake
Strong, J. C.	Leadville	Leadville 72W	Lake

LIMON, COLORADO

Kennedy, G. A.	Limon	Limon 19W	Denver
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LITTLETON, COLORADO

Crysler, W. C.	Coors Bldg.	Littleton 44	Arapahoe
Moore, G. C.	First National Bank Bldg.	Littleton 132W	Denver
Otte, J. E.	169 N. Logan	Littleton 211 Res. 10M	Denver

LONGMONT, COLORADO

Andrew, John	Longmont Hospital	Longmont 32J	Boulder
Dietmier, H. R.	Longmont Hospital	Longmont 25	Boulder
Hageman, George R.	Longmont Hospital	Longmont 867J	Boulder
Jernigan, V. J.	615 4th Ave.	Longmont 247	Boulder
Matlack, J. A.	Longmont Hospital	Longmont 137	Boulder
Sidwell, C. E.	Longmont Hospital	Longmont 200J	Boulder
White, W. J.	662 4th Ave.	Longmont 50	Boulder
Woods, W. P.	662 4th Ave.	Longmont 51	Boulder

LOUISVILLE, COLORADO

Bartholomew, J. D.	Louisville	Louisville	Boulder
Miller, R. B.	Louisville	Louisville 18W	Boulder
Snair, W. L.	Louisville	Louisville 81	Boulder

LOVELAND, COLORADO

Adams, B. L.	Larimer County Bank Bldg.	Loveland 52	Larimer
Gasser, John J.	428 Lincoln Ave.	Loveland 656	Larimer
Gasser, W. P.	428 Lincoln Ave.	Loveland 656	Larimer
Joslyn, S. A.	State Mercantile Bldg.	Loveland 84	Larimer
McFadden, J. G.	433 N. Lincoln Ave.	Loveland 16	Larimer
Stewart, M. J.	Larimer County Bank Bldg.	Loveland 171	Larimer
Weern, W. H.	Loveland	Loveland	Larimer
Wright, R. E.	349 Jefferson Ave.	Loveland 152	Larimer

MANCOS, COLORADO

Trotter, J. R.	Mancos	Mancos 60M	San Juan
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MANITOU, COLORADO

Beck, L. H.	Manitou	Hyland 10	El Paso
Winston, A. L.	Manitou	Hyland 2	El Paso

MANZANOLA, COLORADO

Adams, V. K.	Manzanola	Manzanola 24W	Otero
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McPHEE, COLORADO

Speck, R. T.	McPhee	McPhee 45-J3	San Juan
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MEEKER, COLORADO

Farthing, C. H.	Meeker	Meeker 59	Garfield
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MOUNT HARRIS, COLORADO

Sloan, W. W.	Mount Harris	Hayden 92-J2	Northwestern
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MONTROSE, COLORADO

Brethouwer, C. G.	Box 247	Montrose 399	Montrose
Didrickson, F. G.	602 Main St.	Montrose 29	Montrose
Knott, Isaiah	Keller Bldg.	Montrose 99W	Montrose
Lockwood, Chas. E.	Keller Bldg.	Montrose 137W	Montrose
Spring, John A.	602 Main St.	Montrose 29	Montrose

MORLEY, COLORADO

Parker, Thadd	Morley		Las Animas
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NEW RAYMER, COLORADO

Name	Address	Telephone	Society
Olson, D. G.	New Raymer	Call Long Distance	Weld

OAK CREEK, COLORADO

Courtney, R. F.	Oak Creek	Oak Creek 73	Northwestern
Morrow, E. L.	Oak Creek	Oak Creek 29	Northwestern

OLATHE, COLORADO

Winningham, J. J.	Olathe	Olathe 126	Montrose
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OLNEY SPRINGS, COLORADO

Hipp, J. A.	Olney Springs	Ordway 85-R4	Crowley
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ORDWAY, COLORADO

Desmond, Wm. M.	Ordway	Ordway 154	Crowley
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OVID, COLORADO

Peterson, A. E.	Ovid	Ovid 39	Northeast
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PAGOSA SPRINGS, COLORADO

Miskoweic, A.	Pagosa Springs	Call Long Distance	San Juan
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PAONIA, COLORADO

Hazlett, H. W.	Paonia	Call Long Distance	Delta
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PHIPPSBURG, COLORADO

Fleming, W. S.	Phippsburg	Oak Creek 70-R1	Northwestern
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PIERCE, COLORADO

Mitchell, D. M.	Pierce	Pierce 4W	Weld
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PLATTEVILLE, COLORADO

Kern, B. F.	Platteville	Platteville 8W	Weld
Scheidt, J. H.	Platteville	Platteville 8W	Weld

PORTLAND, COLORADO

Davis, T. A.	Portland	Florence 186-J1	Fremont
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PRITCHETT, COLORADO

Bryant, W. A.	Pritchett	Pritchett 46W	Prowers
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PUEBLO, COLORADO

Baker, W. T. H.	702 No. Main St.	Pueblo 6000	Pueblo
Black, H. A.	702 No. Main St.	Pueblo 6000	Pueblo
Bordner, Alta E.	State Hospital	Pueblo 3451	Pueblo
Buck, W. E.	New City Hall	Pueblo 205	Pueblo
Burkhard, Edwin D.	427 Col. Bldg.	Pueblo 679	Pueblo
Caldwell, C. N.	Thatcher Bldg.	Pueblo 483	Pueblo
Clyman, Irving	Central Block, Pueblo	Pueblo 1500R	Pueblo
Corry, E. H.	Corwin Hospital	Pueblo 1210	Pueblo
Craighead, J. W.	Corwin Hospital	Pueblo 1210	Pueblo
Crozier, R. B.	513 Broadway	Pueblo 2189	Pueblo
Davis, Roy E.	Colorado Fuel & Iron Co. Dispensary	Pueblo 5800	Pueblo
Draper, P. A.	Woodcroft Hospital	Pueblo 84	Pueblo
Dunlop, Josephine N.	Corwin Hospital	Pueblo 1210	Pueblo
Earnest, Clarence E.	414 Thatcher Bldg.	Pueblo 86	Pueblo
Epler, Crum	Woodcroft Hospital	Pueblo 84	Pueblo
Farley, John B.	544 Thatcher Bldg.	Pueblo 483	Pueblo
Finney, R. H.	Corwin Hospital	Pueblo 1210	Pueblo
Geissinger, J. D.	702 No. Main St.	Pueblo 6000	Pueblo
Glatther, A. W.	State Hospital	Pueblo 3451	Pueblo
Heller, F. M.	650 Thatcher Bldg.	Pueblo 400	Pueblo
Hopkins, G. H.	702 No. Main St.	Pueblo 6000	Pueblo
Hutchinson, Wm.	C. F. & I. Dispensary	Pueblo 5800	Pueblo
Ireland, P. M.	430 Colorado Bldg.	Pueblo 2078	Pueblo
James, W. A.	C. F. & I. Dispensary	Pueblo 5800	Pueblo
Johnston, W. S.	208 Colorado Bldg.	Pueblo 50	Pueblo
LaMoure, H. A.	St. Mary Hospital Annex	Pueblo 4760	Pueblo
Lassen, Fritz	702 No. Main St.	Pueblo 6000	Pueblo
Low, H. T.	626 Thatcher Bldg.	Pueblo 400	Pueblo
Lowe, Wilbur	232 Colorado Bldg.	Pueblo 1936	Pueblo
Luqueer, F. A.	702 No. Main St.	Pueblo 6000	Pueblo
Marmaduke, C. V.	Colorado Bldg.	Pueblo 1936	Pueblo
Mast, W. H.	402 Colorado Bldg.	Pueblo 4688	Pueblo
Maynard, C. W.	702 No. Main St.	Pueblo 6000	Pueblo
McDonnell, J. J.	103 Broadway	Pueblo 232	Pueblo

PUEBLO (Continued)

Name	Address	Telephone	Society
Merriman, Amherst	Colorado Bldg.	Pueblo 1460	Pueblo
Myers, George M.	702 No. Main St.	Pueblo 6000	Pueblo
Nelson, Samuel	216 Colorado Bldg.	Pueblo 1871, if no ans. 1900	Pueblo
Nicoletti, Frank	302 Colorado Bldg.	Pueblo 1319	Pueblo
Norman, J. S.	Corwin Hospital	Pueblo 1210	Pueblo
Pattee, J. J.	Thatcher Bldg.	Pueblo 241	Pueblo
Peirce, F. J.	650 Thatcher Bldg.	Pueblo 432	Pueblo
Rice, George E.	702 No. Main St.	Pueblo 6000	Pueblo
Rich, W. F.	Thatcher Bldg.	Pueblo 1154	Pueblo
Robe, R. C.	Thatcher Bldg.	Pueblo 333	Pueblo
Rosenbloom, Julius Lee	Colorado State Hospital	Pueblo 3451	Pueblo
Rusk, H. S.	Colorado Bldg.	Pueblo 174	Pueblo
Schwer, J. L.	522 Thatcher Bldg.	Pueblo 282	Pueblo
Senger, William	Corwin Hospital	Pueblo 1210	Pueblo
Singer, W. F.	114 W. 9th St.	Pueblo 80	Pueblo
Snedec, J. F.	650 Thatcher Bldg.	Pueblo 400	Pueblo
Steinhardt, E. H.	Basement City Hall	Pueblo 3865	Pueblo
Stoddard, T. A.	Thatcher Bldg.	Pueblo 483	Pueblo
Streamer, C. W.	401 Colorado Bldg.	Pueblo 140	Pueblo
Taylor, R. R.	Thatcher Bldg.	Pueblo 587, if no ans. 1210	Pueblo
Thompson, J. W.	Thatcher Bldg.	Pueblo 480	Pueblo
Unfug, G. A.	316 Colorado Bldg.	Pueblo 383	Pueblo
Vogt, H. J.	103 Broadway	Pueblo 232	Pueblo
Ward, L. L.	316 Colorado Bldg.	Pueblo 383	Pueblo
White, J. W.	702 No. Main	Pueblo 6000	Pueblo
Wolf, John G.	335 Colorado Bldg.	Pueblo 153	Pueblo
Woodbridge, J. H.	650 Thatcher Bldg.	Pueblo 400	Pueblo
Zimmerman, F. H.	Colorado State Hospital	Pueblo 3451	Pueblo

RIDGE, COLORADO

Pershing, C. L.	Ridge	Arvada 133	Denver
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RIFLE, COLORADO

Clagett, O. F.	Rifle	Rifle 63W	Garfield
Sands, G. M.	Rifle	Rifle 85	Garfield

ROCKY FORD, COLORADO

Baker, G. M.	409 S. Main	Rocky Ford 318J	Crowley
Blotz, B. B.	First National Bank Bldg.	Rocky Ford 100	Otero
Blotz, B. F.	First National Bank Bldg.	Rocky Ford 100	Otero
Fenton, W. C.	918 Elm Ave.	Rocky Ford 363J	Otero
Lawson, J. A.	209½ No. Main St.	Rocky Ford 80J	Otero

SAGUACHE, COLORADO

Gotthelf, I. L.	Saguache	Saguache 86F1	San Luis Valley
Shippey, O. P.	Saguache	Saguache 23	San Luis Valley

SALIDA, COLORADO

Bender, A. J.	Hively Bldg.	Salida 27	Lake
Cochems, F. N.	Third & G Sts.	Salida 63	Lake
Curfman, George H.	1st & F Sts.	Salida 156	Chaffee
Fuller, C. R.	1st & F. Sts.	Salida 80	Chaffee
Larimer, G. W.	Rio Grande Hospital	Salida 145W	Chaffee
Parker, O. T.	Sandusky Bldg.	Salida 50	Chaffee
Thompson, L. E.	Woolworth Bldg.	Salida 133	Chaffee

SEGUNDO, COLORADO

Drisdale, W. E.	Segundo	Trinidad 0312-J2	Las Animas
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SEIBERT, COLORADO

McBride, William L.	Seibert	Seibert 14-W	Kit Carson
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SIMLA, COLORADO

Groves, Dale O.	Simla	Simla 5-H2	El Paso
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SOMERSET, COLORADO

McConnell, J. E.	Somerset	Call Long Distance	Delta
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STEAMBOAT SPRINGS, COLORADO

Turner, Duane	Steamboat Springs	Steamboat Springs 103	Northwestern
Willett, F. E.	Steamboat Springs	Steamboat Springs 44	Northwestern

STERLING, COLORADO

Name	Address	Telephone	Society
Daniel, J. H.	Henderson Bldg.	Sterling 242W	Northeast
Elliff, E. A.	108 No. 3rd St.	Sterling 993W	Northeast
Hummel, E. P.	Commercial Bldg.	Sterling 501W	Northeast
Latta, C. J.	123 So. 2nd St.	Sterling 468W	Northeast
Naugle, J. E.	Henderson Bldg.	Sterling 787	Northeast
Palmer, F. E.	Henderson Bldg.	Sterling 327W	Northeast
Schmitt, O. J.	123 So. 2nd St.	Sterling 323-W	Northeast
Tripp, C. I.	123 So. 2nd St.	Sterling 178W	Northeast

STRASBURG, COLORADO

Lewark, Sarah D. H.	Strasburg	Strasburg 1	Arapahoe
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SWINK, COLORADO

Stanley, George B.	Box 185	Swink 499J3	Weld
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TELLURIDE, COLORADO

Parker, J. J.	Telluride	Telluride 20	Delta
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TIOGA, COLORADO

Fowler, J. R.	Tioga	Walsenburg 08-J1	Huerfano
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TRINIDAD, COLORADO

Abrums, H. E.	105 E. Main St.	Trinidad 82	Las Animas
Adams, O. F.	201½ E. Main St.	Trinidad 1260	Las Animas
Albi, M. C.	Turner Bldg.	Trinidad 1	Las Animas
Beshoar, Ben B.	234½ No. Commercial St.	Trinidad 3	Las Animas
Carmichael, P. W.	McCormick Bldg.	Trinidad 346	Las Animas
Costigan, D. D.	Opera House Bldg.	Trinidad 15	Las Animas
Espey, J. G.	Main & Animas Sts.	Trinidad 2	Las Animas
Espey, John R.	335 E. Main St.	Trinidad 67	Las Animas
Freudenthal, Alfred	Samuel Bldg.	Trinidad 356	Las Animas
McClure, Charles O.	127 No. Commercial St.	Trinidad 447W	Las Animas
Newburn, Walter L.	Opera House Bldg.	Trinidad 848	Las Animas
Richie, Lee T.	McCormick Bldg.	Trinidad 163	Las Animas
Thompson, David G.	201½ E. Main St.	Trinidad 281	Las Animas

TWO BUTTES, COLORADO

Verity, William P.	Two Buttes	Two Buttes 8J	Prowers
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VICTOR, COLORADO

Condit, E. G.	Victor	Cripple Creek 99	San Juan
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WALSENBURG, COLORADO

Andrews, George D.	513 Main St.	Walsenburg 134W	Huerfano
Chapman, W. S.	118 E. 5th St.	Walsenburg 324	Huerfano
Lamme, J. M.	Lamme Bros. Hospital	Walsenburg 178	Huerfano
Lamme, S. J.	Lamme Bros. Hospital	Walsenburg 178	Huerfano
Matthews, P. G.	Kearns Bldg.	Walsenburg 92W	Huerfano
Noonan, George M.	118 E. 5th St.	Walsenburg 324	Huerfano

WELDONA, COLORADO

Hawthorne, H. M.	Weldona	Weldona 3	Morgan
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WELLINGTON, COLORADO

Betts, F. A.	Wellington	Wellington 8	Larimer
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WHEATRIDGE, COLORADO

Masten, A. R.	Lutheran Sanitarium	Arvada 633	Denver
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WILEY, COLORADO

Housel, C. L.	Wiley	Wiley 54	Prowers
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WINDSOR, COLORADO

Bartz, L. E.	Windsor	Windsor 5	Weld
Nelson, G. E.	Windsor	Windsor 113	Weld
Sabin, C. W.	Windsor	Windsor 113	Weld

WOODMEN, COLORADO

Harris, C. E.	Woodmen	Main 1018	El Paso
Schultz, H. H.	Woodmen	Main 1018	El Paso

WRAY, COLORADO

Buchanan, Lawrence D.	Wray	Wray 138	Northeast
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YAMPA, COLORADO

Male, J. T.	Yampa	Yampa 17	Northwestern
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YUMA, COLORADO

<i>Name</i>	<i>Address</i>	<i>Telephone</i>	<i>Society</i>
Bennett, C. J.	Yuma	Yuma 73	Northwestern
Flaten, A. P.	Yuma	Yuma 278	Morgan

OUT OF STATE

<i>Name</i>	<i>Address</i>	<i>Postoffice</i>	<i>Society</i>
Allison, James G.	Wheatland	Wheatland, Wyo.	Boulder
Anderson, George M.	Boyd Bldg.	Cheyenne, Wyo.	Denver
Andrus, L. F.	Hotel De Vargas	Las Vegas, New Mexico	Denver
Charney, Herman	Oneida County Hospital	Rome, N. Y.	Pueblo
Cook, R. C.	Veterans' Administration Hospital	Excelsior Springs, Mo.	Otero
Cornell, H. M.	Dulce	Dulce, N. M.	San Juan
Dunham, Jas. I.	Chama	Chama, N. M.	San Juan
Dunkle, Frank	Philadelphia	Philadelphia, Pa.	Chaffee
Earp, J. R.	Box 750	Santa Fe, N. M.	Denver
Ellis, A. G.	Bangkok	Bangkok, Siam	El Paso
Eyerly, T. L.	Wichita	Wichita, Kansas	Huerfano
Harvey, E. A.		Boston, Mass.	Denver
Howard, C. J.	U. S. Veterans Hospital	Rutland Heights, Mass.	Denver
Johnson, E. R.	Fort Mackenzie	Sheridan, Wyo.	Morgan
Jones, S. Fosdick	710 So. Orange Grove Avenue	Pasadena, Calif.	Denver
Kampmeier, Rudolph H.	Louisiana State University	New Orleans, La.	Pueblo
Koplowitz, J. E.	Baltimore	Baltimore, Maryland	Denver
Laverty, Lucius F.	608 South Williams St.	Bay City, Mich.	Denver
Lee, George F.	Hot Lake Sanitarium	Hot Lake, Ore.	Denver
McArthur, A. W.	Chillicothe	Chillicothe, Mo.	Delta
McCracken, Chas. P.	Jonesboro	Jonesboro, Arkansas	El Paso
McGill, Earl D.	3923 Warwick Blvd.	Kansas City, Mo.	Denver
Menkel, H. C.	Simla	Simla, India	Denver
Nelson, H. H.	Fort Stanton	Fort Stanton, N. M.	Denver
O'Byrne, George T.	414 Steiner Bldg.	Lima, Ohio	Otero
Plank, J. R.	Charity Hospital	New Orleans, La.	Denver
Price, Ligon	Fairmount Hospital No. 6	Fairmount, W. Va.	Denver
Pugh, C. G.	Laramie	Laramie, Wyo.	Larimer
Reid, H. S.	Desert Inn	Palm Springs, Calif.	Denver
Richardson, H. L.	1344 Connecticut Ave.	Washington, D. C.	El Paso
Richie, G. T.	Sunrise	Sunrise, Wyo.	Denver
Salisbury, E. I.	326 Park Blvd.	Marion, Ohio	Denver
Schwer, Carl	Box 309	Sedro Woolley, Wash.	Denver
Sorenson, George	367 Cumberland St.	Glendale, California	Otero
Stemen, W. E.	765 Bedford Road	Gross Point Park, Mich.	Denver
Tidd, C. H.	539 N. Hoover	Whittier, Calif.	Delta
Tirador, P. A.	Chilocco	Chilocco, Oklahoma	Pueblo

HONORARY MEMBERS

Richard C. Cabot	Cambridge, Mass.	John Ridlon	Newport, R. I.
Livingston Farrand	Ithaca, N. Y.	William Robert Tyndale	Salt Lake City, Utah
Chas. H. Mayo	Rochester, Minn.	L. B. Wilson	Rochester, Minn.
Lewis Linn McArthur	Chicago, Ill.		

ASSOCIATE MEMBERS

<i>Name</i>	<i>Local Address</i>	<i>Postoffice</i>	<i>Constituent Society</i>
W. C. Bane	1005 Republic Bldg.	Denver	Denver
N. W. Bellrose	Eaton	Eaton	Weld
Sherman G. Bonney	115 W. First St.	DeKalb, Illinois	Denver
D. I. Christopher	1028 N. Wahsatch St.	Colorado Springs	El Paso
Edgar F. Conant	823 Republic Bldg.	Denver	Denver
George B. Crews	3135 W. 44th Ave.	Denver	Denver
M. R. Fox	Boulder	Boulder	Northeast
Gorsuch, John C.	334 Mack Bldg.	Denver	Denver
William W. Grant	930 Pennsylvania St.	Denver	Denver
William Greig	1267 Pearl St.	Denver	Northeast
Allen H. Harris	969 Acoma St.	Denver	Denver
A. I. Hayes	505 Republic Bldg.	Denver	Denver
Hickey, C. G.	823 Republic Building	Denver	Denver
E. C. Hill	1101 E. Alameda Ave.	Denver	Denver
W. P. Hunnicutt	Hawthorne	Hawthorne, Calif.	Pueblo
Lt. Col. Paul C. Hutton		San Francisco, Calif.	Denver
Kelsey, Otis H.	633 Majestic Bldg.	Denver	Denver
Charles Jaeger	632 Republic Bldg.	Denver	Denver
M. Kleiner	1024 Republic Bldg.	Denver	Denver
Leavitt, Byron C.	Millbrook	Millbrook, Mass.	Denver
George F. Libby	1319 Wilnot Place	Victoria, B. C.	Denver
Lorenz B. Lockard	655 Gaylord St.	Denver	Denver
Minnie C. T. Love	175 So. Lafayette St.	Denver	Denver

ASSOCIATE MEMBERS (continued)

<i>Name</i>	<i>Local Address</i>	<i>Postoffice</i>	<i>Constituent Society</i>
Macomber, G. N.	1415 Welton Street	Denver	Denver
J. H. McKay	505 Republic Bldg.	Denver	Denver
H. W. McLauthlin	532 Republic Bldg.	Denver	Denver
Luke McLean	311 E. Evans Ave.	Pueblo	Pueblo
J. H. Madden	1401 W. Colorado Ave.	Colorado Springs	El Paso
Wilbur F. Martin	1303 N. Tejon St.	Colorado Springs	El Paso
Samuel W. Miller	1584 Harrison St.	Salt Lake City	Denver
Ogilbee, H. M.	Manitou	Manitou	El Paso
Queal, E. B.	Physicians Bldg.	Boulder	Boulder
Ramaley, Francis	972 Pleasant St.	Boulder	Boulder
J. E. Scannell	East Andover	New Hampshire	Las Animas
O. W. Spicer	423 N. Weber St.	Colorado Springs	El Paso
G. W. Stiles	440 P. O. Bldg.	Denver	Denver
C. F. Taylor	802 W. 13th St.	Pueblo	Pueblo
Tennant, C. E.	1254 School St.	Chehalis, Wash.	Denver
Horace G. Wetherill	1085 W. Franklin St.	Monterey, Calif.	Denver
White, H. T.	4201 W. 49th Ave.	Denver	Denver
Newton Wiest	1754 Albion St.	Denver	Denver
Sara C. Wilcox	904 Republic Bldg.	Denver	Denver
Aubrey H. Williams	1024 Republic Bldg.	Denver	Denver

THIS DIRECTORY IS REMOVABLE

The foregoing directory of members, corrected to November 25, 1933, has been purposely placed in the exact center of the bound pages of this issue of Colorado Medicine. Readers wishing to separate it from the journal and keep it for handy desk reference can do so without tearing its pages or injuring the remainder of the issue. Bend back the wire stitches between pages 504 and 505, and remove the twenty-page directory (pages 495 to 514 inclusive).

The Executive Secretary will deeply appreciate immediate notification of any error that may have crept into this directory.

A few reprints of the directory will be prepared and will be available at twenty-five cents per copy, from the Executive Office of the Society.

Colorado State Medical Society Officers, 1933-1934

President: Gerald B. Webb, Colorado Springs.

President-elect: N. A. Madler, Greeley.

Vice Presidents: First, Frank E. Rogers, Denver; Second, A. G. Taylor, Grand Junction; Third, C. E. Sidwell, Longmont; Fourth, Ward C. Fenton, Rocky Ford.

Constitutional Secretary: John S. Bouslog, Denver.

Treasurer: Leo W. Bortree, Colorado Springs.

(The above officers constitute the Board of Trustees of the Society.)

Executive Secretary: Mr. H. T. Sethman, 537 Republic Building, Denver. Telephone, KEystone 0870.

Delegates to American Medical Association: Senior, John W. Ames, Denver; Alternate, A. J. Markley, Denver; Junior, Crum Epler, Pueblo; Alternate, John B. Crouch, Colorado Springs.

<i>Councillors:</i>	<i>Term Expires</i>
District No. 1 F. W. Lockwood, Fort Morgan	1936
District No. 2 Ella A. Mead, Greeley	1936
District No. 3 George P. Lingenfelter, Denver	1936
District No. 4 C. T. Knuckey, Lamar	1935
District No. 5 George D. Andrews, Walsenburg	1935
District No. 6 C. Rex Fuller, Salida	1935
District No. 7 A. L. Burnett, Durango	1934
District No. 8 Lee Bast, Delta	1934
District No. 9 W. W. Crook, Glenwood Springs, Chairman	1934

Standing Committees, 1933-1934

Credentials: John S. Bouslog, Denver, Chairman; Harold T. Low, Pueblo; John A. Sevier, Colorado Springs.

Scientific Work: Kenneth D. A. Allen, Denver, Chairman; Burgett Woodcock, Greeley; G. Burton Gilbert, Colorado Springs.

Arrangements: John B. Hartwell, Colorado Springs, Chairman; William A. Campbell, Jr., Colorado Springs; Carl S. Gydesen, Colorado Springs.

Public Policy: Charles O. Giese, Colorado Springs, Chairman; Walter W. King, Denver, Vice Chairman; H. R. McKeen, Denver; Gerrit Heusinkveld, Denver; Harvey W. Snyder, Denver; James J. Waring, Denver; Lanning E. Likes, Lamar; W. W. Harmer, Greeley; Charles H. Platz, Fort Collins; Gerald B. Webb, Colorado Springs, ex-officio; John S. Bouslog, Denver, ex-officio; Mr. H. T. Sethman, Denver, ex-officio.

Publication: C. S. Bluemel, Denver (1934); William H. Crisp, Denver (1935); C. F. Kemper, Denver (1936).

Medical Defense: T. D. Cunningham, Denver (1934), Chairman; Casper F. Hegner, Denver (1935); Frank B. Stephenson, Denver (1936).

Medical Education and Hospitals: J. A. Sevier, Colorado Springs, Chairman; Royal H. Finney, Pueblo; Thad P. Sears, Denver.

Library and Medical Literature: George A. Boyd, Colorado Springs, Chairman; E. D. Downing, Denver; F. W. Kenney, Denver.

Cooperation with Allied Professions: M. O. Shivers, Colorado Springs, Chairman; H. S. Finney, Denver; John R. Evans, Denver.

Medical Economics: Philip Hillkowitz, Denver, Chairman; Claude E. Cooper, Denver; F. Julian Maier, Denver.

Necrology: George M. Blickensderfer, Denver, Chairman; John F. McConnell, Colorado Springs; C. W. Streamer, Pueblo.

Special Committees, 1933-1934

Postgraduate Clinics: C. E. Harris, Woodmen, Chairman; Maurice H. Rees, Denver; Nolie Mumey, Denver; O. M. Gilbert, Boulder; Fred M. Heller, Pueblo.

Military Affairs: George P. Lingenfelter, Denver,

Chairman; John W. Ames, Denver; Robert M. Fulwider, Fort Lyon; Louis V. Sams, Denver; W. P. McCrossin, Colorado Springs.

Advisory to the School of Medicine: Frank B. Stephenson, Denver, Chairman; John S. Bouslog, Denver; T. D. Cunningham, Denver; C. E. Sidwell, Longmont; Charles O. Giese, Colorado Springs.

Cancer Education: Lyman W. Mason, Denver (1936), Chairman; Charles T. Ryder, Colorado Springs (1936); John B. Hartwell, Colorado Springs (1936); C. W. Maynard, Pueblo (1935); W. W. Wasson, Denver (1935); H. S. Finney, Denver (1935); William H. Halley, Denver (1934); K. D. A. Allen, Denver (1934); W. W. Haggart, Denver (1934).

Nursing Education: Frank E. Rogers, Denver, Chairman; H. A. Black, Pueblo; C. T. Knuckey, Lamar.

Cooperation with Board of Health: E. N. Chapman, Colorado Springs, Chairman; John W. Ames, Denver; Margaret Long, Denver.

Workmen's Compensation Affairs: Peter O. Hanford, Colorado Springs, Chairman; A. S. Cecchini, Denver; J. B. Farley, Pueblo.

Constituent Societies Meeting Dates; Secretaries

Arapahoe County—Last Monday of each month; secretary, W. C. Crysler, Littleton.

Boulder County—Second Thursday; secretary, Margaret L. Johnson, Boulder.

Chaffee County—First Tuesday of each month; secretary, C. Rex Fuller, Salida.

Crowley County—Second Wednesday of each month; secretary, J. A. Hipp, Olney Springs.

Delta County—Last Friday of each month; secretary, Lee Bast, Delta.

Denver County—First and third Tuesday of each month; secretary, O. S. Philpott, Denver.

El Paso County—Second Wednesday of each month; secretary, Carl S. Gydesen, Colorado Springs.

Fremont County—Fourth Monday of each month; secretary, Archie Bee, Canon City.

Garfield County—Last Thursday of each month; secretary, W. W. Evans, Glenwood Springs, Colo.

Huerfano County—Third Thursday of each month; secretary, G. M. Noonan, Walsenburg, Colo.

Kit Carson County—Quarterly, first Monday of December, March, June and September; secretary, W. L. McBride, Seibert.

Lake County—First Thursday of each month; secretary, J. C. Strong, Leadville.

Larimer County—First Wednesday of each month; secretary, Duane Hartshorn, Fort Collins.

Las Animas County—First Friday of each month; secretary, C. O. McClure, Trinidad.

Mesa County—Third Tuesday of each month; secretary, H. M. Tupper, Grand Junction.

Montrose County—First Thursday of each month; secretary, C. E. Lockwood, Montrose.

Morgan County—Last Monday of each month; secretary, Paul E. Woodward, Fort Morgan.

Northeast Colorado—Second Thursday in each month; secretary, E. P. Hummel, Sterling.

Northwestern Colorado—Second Thursday of each month; secretary, Duane Turner, Steamboat Springs.

Otero County—Second Friday of each month; secretary, C. E. Morse, La Junta.

Prowers County—First Tuesday of each quarter; secretary, R. J. Rummell, Lamar, Colo.

Pueblo County—First and Third Tuesday of each month; secretary, J. L. Rosenbloom, Pueblo.

San Juan—Second Saturday, January and alternate months; secretary, R. L. Downing, Durango.

San Luis Valley—Fifteenth of each month; secretary, Sidney Anderson, Alamosa.

Weld County—First Monday of each month; secretary, Tracy D. Peppers, Greeley, Colo.

PROCEEDINGS OF THE HOUSE OF DELEGATES

((Continued from Page 494))

THIRD MEETING OF THE HOUSE OF DELEGATES

10:15 a. m., September 16, 1933

The meeting was called to order at 10:15 o'clock by President Webb.

The Executive Secretary called the roll and announced a quorum.

Dr. W. P. Woods, alternate to Dr. John Andrew of Boulder County, was seated by consent of the House.

Dr. John Gasser, alternate to Dr. C. H. Platz of Larimer County, was seated by consent of the House.

The Executive Secretary read minutes of the previous two sessions of the House of Delegates. Upon motion of Dr. Danielson, seconded and carried, these minutes were approved.

The President announced that the next order of business was election of officers. There were no nominations from the floor. Dr. Fulwider moved that since there was no contest for any of the offices, the candidates named by the Nominating Committee (See Page 491) be elected by acclamation. The motion was carried. Dr. Garwood moved that the Secretary cast the unanimous ballot for the nominees submitted by the Nominating Committee. Motion seconded by Dr. Danielson and carried. The Executive Secretary cast the ballot as instructed.

The Committee on Public Policy presented the following report:

September 15, 1933.

Mr. President and members of the House of Delegates:

Your Committee on Public Policy having considered the Resolution concerning the gift to the State of Colorado of the Agnes Memorial Sanitarium begs to submit the following report:

We are reminded that the House of Delegates has previously acted in adverse manner on this proposal.

We are also reminded that some of those of our profession who sponsor this resolution have both publicly and privately stated that the members of this Committee do not properly understand tuberculous problems since they are surgeons and internists who have not sufficient contact with the tuberculous to enable them to judge of either the needs of or for such an institution.

And since our honored new President, Gerald B. Webb, is so prominently identified with the problems of the care of this malady, his appointments to the new Public Policy Committee will assuredly show such competence in this particular that the existing Committee feel that a problem of such importance should be given the courtesy of their consideration.

This Committee recognizes that there is a very vital problem in the State's institutional care of the indigent tuberculous and particularly is this true as to childhood tuberculosis.

In recognition of the tremendous service rendered the people of our State with such purely unselfish spirit as has been evidenced for years by Doctor Johanna Gelien and a host of other competent humanitarian workers who sponsor this resolution, we most respectfully urge you, Mr.

President, to re-refer this momentous question to your new Public Policy Committee.

Very respectfully submitted,
W. W. KING, Chairman,
H. R. McKEEN,
G. HEUSINKVELD,
O. D. GROSHART,
A. C. HOLLAND,
L. W. FRANK.

Dr. Garwood moved that the report of the Committee be adopted. Motion seconded and carried.

Dr. Low: "Mr. President, at this time I think it is proper that this House of Delegates should offer a vote of thanks to those of the local committees and all others who have contributed to making this meeting such a success. I therefore move that the Secretary be instructed to write letters to all concerned thanking them for their services in this connection."

Motion was seconded and carried.

There were no further reports of Reference Committees.

The President called for unfinished business.

Mr. Sethman: "Mr. President, under unfinished business is final consideration of the amendments to the by-laws presented under instructions of the Board of Trustees to carry into effect the Constitutional amendments adopted Thursday morning, increasing the number of Councillor Districts from five to nine."

Dr. Bortree moved adoption of the amendment to Chapter IX of the by-laws as printed in the Handbook (See Page 470). Motion seconded by Dr. Barnard and carried.

Mr. Sethman: "The next unfinished business on the desk is the amendment to the by-laws offered Thursday evening by Dr. Garwood,—amendment to Chapter X, Section 11, line 4, to insert the words 'and nursing' between the word 'veterinary' and the word 'professions.' That is the section setting up the duties of the Committee on Cooperation with Allied Professions and will make the sentence read: 'The Committee on Cooperation with Allied Professions shall represent the Society in its relations with the official associations in this State of the dental, pharmacal, veterinary and nursing professions.'"

This amendment was adopted, on motion regularly carried.

Mr. Sethman: "The next piece of unfinished business on the desk is the adoption of that portion of the report of the Committee on Audits and Appropriations which was segregated upon request of Dr. Garwood. That was the clause in the report referring to the appropriation of \$300 to be used by the University of Colorado School of Medicine and Hospitals for establishing the penalty questionnaire system of admissions, as prepared jointly by the Advisory Committee of this Society and the dean and superintendents of the hospitals.*

*It would appear that the segregation here mentioned, and the subsequent motions, discussion, and votes in connection therewith, were unnecessary and out of order in view of the fact (See Page 490) that Dr. Garwood's original motion was lost for want of a second, that under a ruling of the Chair the entire report of the Committee was before the House for adoption, and that a motion adopting the whole report was regularly carried. Without a detailed transcript available at the later meeting, officers and delegates failed to remember correctly the previous action and the procedure continued on the assumption that the clause in question had been segregated.—Sec'y.

"The clause that was segregated read: '* * that the House appropriate from the Society's educational fund reserves the sum of three hundred dollars to be used by the administration of the Colorado School of Medicine and Hospitals in establishing the penalty questionnaire system of admissions as prepared jointly by the Advisory Committee of this Society and the Dean and Superintendent of the Hospitals'."

Dr. McClanahan: "Mr. President, my local Society commissioned me, when I came over here, to introduce a resolution calling for a reduction in our annual dues to the State Medical Society from ten dollars to five dollars."

"I canvassed some of the members to find out what prospect there was of obtaining a favorable vote on the adoption of such a resolution and I saw very quickly that it didn't have a Chinaman's chance, and having been very ill the day before, I was not in a good enough fighting mood to improve its chances."

"I won't introduce that resolution, but I will oppose any expenditures that tend to increase these dues. Why, twenty years ago our annual dues in this Society were three dollars! Now they are ten dollars! They have crept up imperceptibly and in addition to those dues we pay registration fees. We allow these things to creep upon us without any protest, and it won't be very long at this rate until we have to pay our entire income in order to maintain our standing in the State Medical Society."

"I hope, gentlemen, that you will vote this proposal down."

Dr. Low: "If Dr. McClanahan will investigate this report, he will find out that including this three hundred dollar appropriation we have reduced the budget thirty-one hundred dollars below what we expended last year."

"Furthermore, this is a just and right proposal. We had a special meeting of the House of Delegates in Denver in which several matters came up that have since been threshed out. To help thresh those matters and settle the difficulties involved, we have decided that the thing to do is to change the method of admission of patients to the General Hospital. Therefore, after due consideration, we are thoroughly in accord with this idea of giving the Colorado General Hospital Superintendent sufficient funds to make the proper questionnaire, so that these patients may enter on their own penalty. That will settle the situation."

"The State has not given them any money to do so. In order to settle our own difficulties we felt this was right, proper, and just, and I hope you will vote it."

Dr. Bortree: "For the information of Dr. McClanahan and those other delegates who are not fully aware of the situation, this expenditure is to be made not from dues but from our accumulated reserves in the fund for the education of the public, which fund today stands at \$5,404.59. This three hundred dollars will come out of this fund and will not be an increased expenditure on the part of any member of the Society."

Dr. Garwood: "Mr. President, I'd like to ask Dr. Rees a question on this matter. Is this a purely administrative matter that is in his hands? Or does it interfere with the State law in any way, or in any way attempt to simplify this law or administer it in a different way than the way in which it has been administered?"

Dr. Rees: "Mr. President and Members of the House of Delegates: In the first place I'd like to state that this was not a request from the institution; it was a suggestion that came from

outside the institution from people who knew our extreme financial situation."

"So far as the law is concerned, the law simply states that patients shall be admitted on forms devised by the administration of the institution. We have the power in the institution to use whatever forms we see fit to use, and the content of those forms is entirely in our own hands."

Dr. Stephenson: "I think perhaps the question in Dr. McClanahan's mind is not whether such a questionnaire should be issued, but why the expense should be borne by the Colorado State Medical Society to correct abuses that exist in the admissions at Colorado General Hospital."

"I may answer that by saying that I had the pleasure of meeting with the Advisory Committee most of the times it met. Toward the end of our series of meetings we were astounded to discover that the abuses of the admissions were largely carried on by doctors themselves and by county commissioners. In investigating a large number of complaints that were turned in by doctors, we found that in every instance the abuse was by the referring doctor."

"The reasons for those abuses may be many. One is that the doctor is approached by the patient with a request to go in to the Hospital. The doctor is embarrassed in the situation and hates to refuse."

"In other instances local jealousies are responsible and the doctor who has a case that needs attention out of his particular field of practice, rather than refer that case to a local confrere, will send him to the state hospital."

"Now we'd just as well call a spade a spade. The attitude of the State Society is that the doctors themselves over the State need education in the handling of these patients. Such questionnaires as these would relieve embarrassment (those who were abusing through that cause) and it would prevent other doctors from wilfully abusing their rights."

"So, we felt that the Society could well spend a little money in educating its doctors against these abuses. I don't know any other way in which that could be better done than by making this small expenditure. This questionnaire would relieve the doctor of embarrassment and would prevent him from wilfully abusing his rights."

Dr. McClanahan: "I simply wish to make it plain that my position on this question was taken in full view of the fact that these questionnaires are desirable and in full view of the fact that drastic reductions had been made in the budget."

"Dr. Low will recall that in our report on the Reports of Officers we especially commended this drastic reduction and recommended still further reductions wherever that might be possible."

"It has been mentioned by several speakers here that this additional expense will not come out of the annual dues, but out of a reserve fund. Gentlemen, that is an evasion of the question. That is the way expenses always come. We take it out of the reserve fund until the reserve fund is exhausted and then it comes out of dues."

"I also took my position in full view of the fact that anyone who recommends a reduction of expenditures by a public body is an unpopular person. We always want our taxes cut down, but we want everybody else's taxes raised so that we can keep on spending. Although I seem to be absolutely alone, I am perfectly sure that I am right."

Dr. Fowler: "It would appear that the privilege of a doctor to refer cases into the Colorado General Hospital was a thing of some moment. Would it not be well, then, for the administration

of the Medical School and Hospital to have the privilege or perhaps the duty of telling any man that if he abuses this privilege he is placed on a black list and can't get a patient in there for the next one, two or three years?"

There was an immediate denial of the legality of such course by many members of the House.

Dr. Lamme: "Who shall make out these questionnaires? That is the interesting thing to me. And how binding are they after they are made out?"

"I am not familiar at all with the report system, but I am very much against any more detail work being thrown upon the doctor in the rural districts. If this thing is supposed to be taken care of by the county officials, all well and good. Personally, not being familiar as I should be with the particular question, I doubt very much whether it will do a great deal of good.

"Any man who comes in and wants admission to the General Hospital, just for the sake of the signature, will be only too glad to sign up even in the presence of a notary, to gain that admission.

"I can't help but think that this question is exaggerated. We see one case of abuse and we magnify that case to such an extent that we think the abuses are very much out of proportion to what they really are.

"I wouldn't be in favor of any more detailed work for the doctor. I feel our financial committee can decide as to the advisability of expending this money. If it's a good thing, go ahead, but for the Lord's sake let's not pile any more detail work upon the doctor. I can't see that this proposed plan offers very much advantage over the regular blanks if we use common sense in choosing the patients who use them."

Dr. Rees: "I'd like to answer some questions that have been raised here.

"I have worked in close contact with this Advisory Committee all year. We worked this thing out together. It is a thing that the institution wants. In fact, it is a thing that we had in mind even before it was taken up with the committee. We believe that the committee has worked out a very excellent questionnaire, and we believe that it will solve a lot of these troubles.

"So far as throwing work on the doctor is concerned, the questionnaire is made out in such a way that the patient who applies to the doctor will fill out the questionnaire. Suppose the patient comes in to Dr. So-and-So and wants to come to the Colorado General Hospital. The Doctor says, 'I don't know whether you can get in there or not. You will have to fill out this form, it must be taken before a notary public and sworn to.'

"Then the patient takes this questionnaire, he fills it out and when he comes to sign his name he finds, there written, the penalty for perjury. The law on perjury is put right on the form. He has to sign with that right before him. We believe that a patient will hesitate in signing one of those things if he has any dishonest statements in it.

"One of the principal difficulties that we have found is that doctors say: 'When a patient comes into my office I don't dare turn him down if he wants to go to the Colorado General Hospital because if I turn him down he will be sore at me and he will shop around and eventually come

to some doctor who will send him in to the Colorado General Hospital and then this patient becomes a friend of the doctor referring him in.' I believe that this method will prevent that shopping around.

"I don't think the committee claims (and I am sure I don't) that this will solve all the difficulties. A State institution is always going to have problems and difficulties. This will not be 100 per cent, but I believe it will go to at least 75 per cent in solving the difficulties. There will be other things that will have to be ironed out at a later date, but we can never be absolutely perfect."

Dr. Woodcock: "In Weld County we have used this system of questionnaire in a very similar condition of affairs. The doctors in the outlying districts send patients in without any recommendation or without any questionnaire. These are turned down until the questionnaire has been produced.

"The doctors in the community from which these patients come know more about their financial condition than we could determine by an investigation from a long distance.

"This has worked marvelously in Weld County, this sort of a questionnaire. It only takes a few minutes for the doctor to sign, with the help of the patient or the family requesting admission to the county hospital."

Dr. Lamme: "I still think these questionnaires should be filled out and the information solicited at the State Hospital."

Vote was taken on expenditure of the \$300 for these forms, and it was carried affirmatively.

President Webb asked for further new business.

Dr. Garwood: "Mr. President, there was a matter brought to by attention by the President of the State Board of Health last evening and I'd like to bring it up as a matter of new business, if it be agreeable."

By consent of two-thirds of the House, consent was granted for presentation of Dr. Garwood's subject.

Dr. Garwood: "The President of the State Board of Health requested that a committee of three be appointed to assist him in ironing out the health situation in this state. I think that it would be wise for us to appoint a committee to cooperate with him.

"I therefore move that a committee of three be appointed by the President to cooperate with the State Board of Health in ironing out the health difficulties of the State."

President Webb: "The Public Policy Committee would naturally take hold of that, but I believe in the recommendations from the Public Health Service in Washington there was a suggestion along your line,—to have the State Medical Society appoint a special committee."

Dr. Garwood: "If I may say, the President of the State Board of Health requested a committee of three as being easier to get together. He wanted especially a cooperative committee to really do something, in earnest."

Dr. Garwood's motion was seconded by Dr. Danielson and carried unanimously.

Dr. Bortree: "Mr. Chairman, I move that the sixty-third annual session of the House of Delegates of the Colorado State Medical Society be adjourned sine die."

The motion was seconded and carried, and the House adjourned sine die.

PROCEEDINGS OF THE GENERAL MEETINGS*

2:00 p. m. September 14th, 1933

President Stephenson: "Members of the Society and Guests: We are now convening the Sixty-third Annual Session of the Colorado State Medical Society. It becomes my duty to relinquish my office and this symbol of authority. This would be an unpleasant duty but for the fact that I am able to turn over the gavel to the gentleman of distinction whom you have chosen to represent you for the coming year.

"I am going to ask two of Dr. Gerald B. Webb's fellow townsmen to escort him to the stage—Dr. Boyd and Dr. Faust."

Dr. Boyd and Dr. Faust escorted Dr. Webb to the stage and Dr. Stephenson passed the gavel to Dr. Webb.

President Webb: "To be honored by one's own State is the greatest honor that any man can receive, and I am most grateful to you for having given me such a high office. I shall attempt to live up to the record of my predecessors like Dr. Stephenson and the others who have gone before.

"At this moment, before we start the scientific program, I want to thank Dr. Gilbert, Dr. Harris, Dr. Drea and Dr. Crouch for their work in arranging this meeting. As you know, the weather man has interfered with it somewhat.

"The first paper on the program today is that of Dr. Burkhard of Pueblo on 'Obstetric Mortality.' I am glad that Dr. Burkhard has been able to come."

The paper was read by the essayist.

Papers were then read on the following subjects: "Obstetrics in the Small General Hospital," by N. L. Beebe, M.D., of Fort Collins:

"Cervical Caesarean Section," by P. W. Whiteley, M.D., of Denver.

Discussion of papers on obstetrics was by Drs. Thomas A. Stoddard, Pueblo; C. T. Knuckey, Lamar; E. L. Harvey, Denver; Merrill Jobe, Denver; Gerrit Heusinkveld, Denver; President Webb, and closing remarks by Drs. Burkhard, Beebe and Whiteley.

A short recess was followed by the presentation of the following papers:

"Fifteen Years of Country Practice," by W. B. Hardesty, M.D., Berthoud; "The Early Recognition and Treatment of Malignancy of the Skin," by G. P. Lingenfelter, M.D., and J. V. Ambler, M.D., Denver; "Primary Carcinoma of the Lung, Simulating Tuberculosis," by I. D. Bronfin, M.D., of Denver; and "Carcinoma of the Oesophagus," by C. O. Giese, M.D., of Colorado Springs. E. W. Perrott, M.D., Denver, presented a paper on "Sarcoma of the Cervix Uteri."

The series of papers just named were discussed by Drs. Leonard Freeman, Denver; Paul H. Guttman, Denver; Fred O. Kettlekamp, Colorado Springs, and C. H. Darrow, Denver. Dr. Ambler spoke on the paper presented by Dr. Lingenfelter and presented slides. Dr. Bronfin made some closing remarks, as did Dr. Giese.

The session thereupon adjourned.

*Addresses, papers, and discussions which formed the scientific proceedings of the General Meetings and which have not been published in this or in the November or October, 1933, issues, will be published in succeeding issues of Colorado Medicine.

9:00 a. m., September 15th, 1933

President Webb called the meeting to order and the program proceeded as follows:

"Therapeutic Uses of Urinary Protease," by Richard W. Whitehead, M.D.; Ward Darley, M.D., and P. A. Dickman, M.D., Denver.

"The Clinical Application of the Ketogenic Diet," by R. K. Dixon, M.D., Denver.

Discussion on the first paper was by Drs. A. J. Markley, Denver; Paul Hildebrand, Brush, George Piness, Los Angeles, Calif., and William H. Mast, Pueblo; and discussion was closed by Dr. Whitehead. There was no discussion of Dr. Dixon's paper.

"The Food Factor in Allergy," by George Piness, M.D., Los Angeles, Calif. Discussion was by Drs. Melville Black, Denver; T. D. Cunningham, Denver; W. C. Howell, Colorado Springs; W. W. Vasson, Denver, and by Dr. Piness, in closing.

"Brain Abscess," by C. H. Darrow, M.D., Denver, was read by the author, as was a paper on "Brain Tumors," by J. R. Jaeger, M.D., Denver; and paper on "Narcolepsy," by L. E. Daniels, M.D., Denver.

These three papers were discussed by Dr. Frank R. Spencer, Boulder; closed by Drs. Darrow, Jaeger and Daniels.

"Improved Surgical Prognosis in Simple Glaucoma," was read by the author, Wm. H. Crisp, M.D., Denver, and discussed by Drs. Melville Black and R. W. Danielson, Denver, and closed by Dr. Crisp.

The meeting then adjourned until 2 p. m.

2:00 p. m., September 15th, 1933

The session was called to order by President Webb at 2:10 o'clock.

President Webb: "Previous to introducing Dr. W. W. King, your first vice president, I wish to say that Dr. Hanford told me the Colorado State Bar Association has given up holding its meeting this year. This makes it all the more marvelous, really, that we have had such a wonderful attendance under these conditions.

"Dr. King, I hand you the gavel for the afternoon."

Chairman King: "The first thing in order is the address of our distinguished President. It is my pleasure to introduce Dr. Gerald B. Webb."

Dr. Webb read his Presidential Address.

Dr. King called on Dr. F. H. Zimmerman of the Colorado Neurological Society to introduce Dr. J. Jay Keegan of the University of Nebraska, at Omaha.

Dr. Zimmerman: "Mr. President and Members of the Colorado State Medical Society: It is again the pleasure of the Colorado Neurological Society to present a guest speaker to the State Medical Society. Our speaker for today is Dr. J. Jay Keegan of the University of Nebraska. Dr. Keegan was formerly Dean of the Medical School, later Professor of Neurosurgery and has recently been elected Professor of Surgery at the University of Nebraska. I know that Dr. Keegan will have matters of interest to all of you. I present Dr. Keegan."

Dr. Keegan read a paper on "Surgical Indications in Head Injuries."

Chairman King: "I am sure we all feel very much indebted to both Dr. Keegan and the Neurological Society for this most practical paper.

"I see that Dr. F. L. Beck, the Wyoming State Society's President, is here. We welcome you, Dr. Beck, as an honor guest and we would be glad to have you come to the platform."

Dr. Beck: "It gives me a great deal of pleasure

to be present at your meeting this year. I am sure you will have a very enjoyable time. I am having one. Thank you."

The following papers were then presented:

"Cardiac Syphilis; a Clinical Study," by C. T. Burnett, M.D., and C. A. Rymer, M.D., Denver.

"Coronary Thrombosis; the Acute Indigestion of Coronary Thrombosis and the Electrocardiograph," by Maurice Katzman, M.D., Denver.

"The Surgical Treatment of Adhesive Pericarditis," by John M. Foster, Jr., M.D., Denver.

The above papers were discussed by Drs. C. T. Burnett and W. B. Yegge, Denver.

"Avoidance of Pulmonary Complications From Intravenous Arsenicals," was read by the author, George C. Shivers, M.D., Colorado Springs.

"The X-ray Determination of Small Intestine Obstruction Without the Use of Opaque Media," was read by the author, K. D. A. Allen, M.D., of Denver.

Discussion by Drs. R. E. Holmes, Canon City, on Dr. Shivers' paper; and W. W. Wasson, Denver, on Dr. Allen's paper.

Dr. Katzman added to the discussion of his paper; Dr. Shivers closed discussion, and Dr. Allen thanked Dr. Wasson for discussing the former's paper.

The meeting then adjourned.

9:00 a. m., September 16th, 1933

The session was called to order by President Webb at 9 a. m. Papers were presented as follows:

"Osteoporosis of the Carpal Bones," by Duval Prey, M.D., Denver.

"Recurrent Dislocation of the Shoulder," by J. S. Norman, M.D., Pueblo.

Papers were discussed by Drs. Leonard Freeman, Denver; O. S. Fowler, Denver, and President Webb.

President Webb: "Is there an official of the Rocky Mountain Orthopedic Club present? Dr. Packard, would you introduce Dr. Forrester, our guest speaker?"

Dr. R. G. Packard: "The Rocky Mountain Orthopedic Club takes great pleasure this morning in introducing as guest speaker a man from Chicago who not alone has made himself a distinguished traumatic surgeon, but who has also been good enough to devote a good part of his time to teaching. Many of us know his last book, 'Imperative Traumatic Surgery,' published some four years ago.

"I am glad to have the privilege this morning of introducing Dr. Claude R. G. Forrester, of Chicago, who will address us on 'The Use of Local Anesthesia in Treatment of Fractures, Together with Ambulatory After-Care.'"

Dr. Forrester's presentation was in the form of two reels of films illustrating his subject.

Dr. Packard: "I am sure we have all been very much interested in the films by Dr. Forrester. The Society feels very much indebted to him for having come from Chicago to give us this very interesting presentation that is for every man, instead of just for the man who is doing only fracture work.

"Dr. Forrester has some splints in the exhibit room that he will be very glad to show to anyone who is interested."

"We are also very much to be complimented on having with us Dr. Hawley from Bridgeport, Conn., of whom all of you know something. Dr. Hawley has been kind enough to get up and give us a film showing his new table."

Dr. Hawley showed films of his newly remodeled fracture table.

Dr. Packard: "Thank you, Dr. Hawley. We have enjoyed those films very much.

"Dr. Hawley has a table in the exhibit room and will be very glad to demonstrate it, or his son who is with him at this time, will be very glad to answer questions regarding it."

Dr. Garwood: "Mr. Chairman, I'd like to move that a rising vote of thanks be extended to Dr. Forrester and to Dr. Hawley for these magnificent demonstrations."

The motion was seconded and carried by a rising vote.

The meeting thereupon adjourned, to meet at 2 p. m.

2:00 p. m., September 16th, 1933

The session was called to order by President Webb at 2 p. m.

President Webb: "I will call on Dr. G. M. Blickensderfer to present the report of the Committee on Necrology."

Dr. Blickensderfer: "Mr. President, will you kindly ask the members to rise while I read the names of members of this Society who have departed this life during the past year?"

The members rose. Dr. Blickensderfer then read his report, as follows:

REPORT OF THE COMMITTEE ON NECROLOGY

A. L. Fugard, Pueblo, Sept. 16, 1932.

David Thompson, Denver, November 22, 1932.

J. W. Craig, Loveland, December 8, 1932.

Noah Dymenberg, Minturn, December 24, 1932.

W. C. Keller, Genoa, December 26, 1932.

B. Frank Walters, Durango, January 19, 1933.

H. L. Williams, Flagler, February 22, 1933.

W. W. Hills, Colorado Springs, March 15, 1933.

Col. E. H. Bruns, Aurora, March 16, 1933.

Wm. M. Spitzer, Denver, March 17, 1933.

F. Dewey Bishop, Denver, March 19, 1933.

H. G. Harvey, Denver, April 15, 1933.

Carbon Gillaspie, Boulder, May 5, 1933.

V. T. Dewar, Grand Junction, May 25, 1933.

W. E. Hays, Sterling, July 3, 1933.

A little more laughter, a little more tears,
And we shall have told our increasing years,
The book is closed and the prayers are said,
And we are a part of the countless dead,
Thrice happy, then, if some soul can say,
"I lived because he has passed my way."

G. M. BLICKENSDERFER, Chairman,
JOHN F. McCONNELL,
LEE BAST.

The Executive Secretary then gave a summary of the proceedings of the House of Delegates during the Sixty-third Annual Session. This included announcement of the new officers elected by the House to serve the Society for the ensuing year.

President Webb: "We won't have time to introduce all the new officers, who have been so well selected, but I will ask Dr. Work and Dr. Blickensderfer to escort Dr. N. A. Madler, your President-elect, to the platform."

Dr. Madler: "Mr. President, Fellow Members of the State Society and Guests: It is with a deep sense of gratitude, responsibility, and humility that I stand before you today.

"If it was predestined that I should be chosen to lead you for a year, what could be more fitting than that the event should occur in the city of Colorado Springs, because it is just sixteen years ago that I landed in Colorado Springs, rather down physically and mentally, and it should also be fitting that I should follow in the footsteps and be led by the very man who put me back

where I am today,—none other than our honored President, Dr. Webb.

"As you all know, troublous times are ahead of the medical profession in the United States. Troublous times are ahead of the medical profession in Colorado. That was excellently portrayed to you in two addresses yesterday.

"Shall we be able to maintain the traditions of our profession? Or shall we willingly or by compulsion drift with the tide? In trying to promulgate those things which we think are best for the medical profession and best for the people, shall we be acclaimed, or shall we be accused of selfishness and self-interest? That remains to be seen during the next two years.

"I am willing to shoulder the responsibility; but in doing so I ask for your indulgence and your hearty cooperation. I want you to remember that like you I am human, and to be human is to err. We shall undoubtedly make mistakes.

"Again, I wish to thank you from the bottom of my heart."

President Webb: "I fear that time will not allow us to introduce all the new officers, but they should have our heartiest congratulations."

The scientific program was then taken up. The order in which papers were presented follows:

"The Relationship of Pharmacy to Medical Economics," read by the author, Paul G. Stodghill, R.Ph., Denver, Guest from the Colorado Pharmacal Association.

"Differential Diagnosis of Lesions of the Colon," read by the author, L. S. Faust, M.D., Denver.

Discussion by Drs. Frank Stephenson, and T. Leon Howard, Denver, and by Dr. Faust in closing.

"Transurethral Resection of Bladder Neck Obstructions," presented by Budd C. Corbus, M.D., Chicago, in the form of a motion picture film, with explanatory remarks.

Discussion on the film by Drs. T. Leon Howard, Denver; O. S. Fowler, Denver, and Harold T. Low, Pueblo.

"Anatomical and Functional Damage to the Adrenal Glands in Visceroptosis, especially in Renoptosis," read by the author, O. S. Fowler, M.D., of Denver.

The paper was discussed by Drs. George Z. Williams, Denver; Paul C. Carson, Denver; Lawrence Dickey, Fort Collins; John B. Hartwell, Colorado Springs, and by Dr. Fowler in closing.

"Tumors of the Thyroid Gland," read by the author, Paul M. Ireland, M.D., Pueblo.

"Blood Pictures in Average Healthy Infants During the First Six Months," presented by the author, A. H. Washburn, M.D., of the Child Research Council, University of Colorado, Denver.

Discussion by President Webb; Drs. Frank B. Stephenson, Denver, and E. N. Chapman, Colorado Springs.

President Webb: "This concludes the Sixty-third Annual Session of the Colorado State Medical Society. I want to thank all for their attendance, their punctuality, and all they have done to make the meeting a success."

ADJOURNMENT.

Registration Statistics

Members, 352; Guests, 5; Visitors, 71; Exhibitors, 20; total, 448. These figures are exclusive of Woman's Auxiliary and women visitors not doctors.

The foregoing minutes of the House of Delegates and the General Meetings are hereby respectfully submitted to the Society.

HARVEY T. SETHMAN,
Executive Secretary.

INDEX TO THE PROCEEDINGS OF THE HOUSE OF DELEGATES

Advisory Committee to the School of Medicine, adoption of committee's report	490
Advisory Committee to the School of Medicine, report of	484
Arrangements, adoption of committee's report	489
Arrangements, report of committee on	473
Audits and Appropriations, adoption of committee's report	490, 515
Audits and Appropriations, report of committee on	490
Books Purchased and received by library committee	475
Budget, adoption of	490
Budget for 1933-1934	466
By-Laws, adoption of amendment concerning committee on allied professions	515
By-Laws, adoption of amendments concerning councillors	515
By-Laws, amendment of, concerning allied professions, proposed	494
By-Laws, amendment of, regarding councillors, proposed	470
Cancer, report of committee on	490
Cancer, resolution creating new committee on	491
Certified Public Accountant, report of	470
Colorado General Hospital, discussion of methods of admission	484, 490, 516
Colorado Springs Chosen for 1934 session	491, 515
Constitutional amendments, recommendation of	466
Constitutional amendments relating to councillors, adoption of	488
Constitutional amendments relating to past presidents, rejection of	488
Constitutional Secretary, report of	467
Cooperation with Allied Professions, adoption of committee's report	489
Cooperation with Allied Professions, report of committee on	476
Councillors, report of board of	466
Credentials, report of committee on	464
Delegates to the American Medical Association, report of	471
Election of officers	515
Executive Secretary, report of	468
Financial statement of secretary	469
Funds, status of	471
Library and Medical Literature, report of committee on	475
Medical Defense, report of committee on	474
Medical Economics, adoption of committee's report	489
Medical Economics, report of committee on	476
Medical Education and Hospitals, report of committee on	475
Membership, annual report of	469
Minutes, approval of 1932	465
Minutes of Special Session, approval of	465
Necrology, report of committee on	519
Nominations, election of committee on	488
Nominations, report of committee on	491
Nursing Education, creation of committee on	494
Officers, election of	515
Past Presidents, discussion of status of	488
Postgraduate Clinics, report of committee on	483
Public Policy, adoption of committee's annual report	489
Public Policy, annual report of committee on	473
Public Policy, special report of committee on, concerning Tuberculosis Sanatorium, with adoption	515
Publication, adoption of committee's report	489
Publication, report of committee on	483
Public Health, creation of special committee on	517
Reference Committees, appointment of	465
Reports of Committees, report of committee on	489
Reports of Officers, report of committee on	489
Resolution of Sympathy	493
Resolutions Committee, appointment of	488
Scientific Work, adoption of committee's report	489
Scientific Work, report of committee on	472
State Registration Fee, adoption of committee's report	490
State Registration Fee, report of committee on	487
Treasurer, adoption of report of	489
Treasurer, report of	471
Trustees, adoption of report of	489
Trustees, report of board of	465
Tuberculosis Sanatorium, resolution defeated and referred to Public Policy Committee	494
Tuberculosis Sanatorium, resolution proposed	493
Veterans' Legislation, report of committee on	484
Workmen's Compensation Affairs, report of committee on	484

The Month's Committee Work

FOURTEEN meetings of State Society Committees, each one important to the welfare of individual members of the Society, were held in the Executive Office in the thirty days that have passed since our last issue went to press. These included three lengthy meetings of the Committee on Medical Defense, three of the Public Health Committee, three of the Advisory Committee to the School of Medicine, including an important joint conference with the Board of Regents of the University of Colorado, two meetings of the Committee on Medical Economics, and one each of the Committees on Scientific Work, Postgraduate Clinics, and Cooperation with Allied Professions, the last-named meeting at the Cosmopolitan Hotel.

Since this issue must carry the detailed proceedings of the Colorado Springs Annual Session, space does not permit reports of the activities of each of these committees. Members are requested to watch for the reports in the January issue.



State Society Committee Acts on Sewage Question

AFTER a study of facts bearing out recent contentions of the Colorado State Board of Health, our State Society's newest special committee, that on cooperation with the Board of Health, issued a strong open letter to state officials and Denver city officials, urging immediate construction of a modern sewage disposal plant for Denver.

The letter was addressed to the Governor, all members of the State Board of Health, the State Engineer and the State Sanitary Engineer. Denver officials who received it included the mayor, the manager of improvements, the manager of health and charity, all members of the city council, the public school health department, officers of the Denver Chamber of Commerce, the Denver Public Health Council, and other organizations. The letter is reproduced in full, as follows:

AN OPEN LETTER

To All Those Upon Whom Rests the Responsibility for the Health of the Citizens of Denver and Its Environs:

We, the undersigned Committee representing the Colorado State Medical Society, have examined the data presented to the Colorado State Board of Health by the State Sanitary Engineer, the State Department of Bacteriology, the Department of Bacteriology of the University of Colorado*, and the United States Public Health Service. We are entirely satisfied that a most deplorable condition exists which endangers the

health of every man, woman, and child living in Denver and along the South Platte river as far as the Nebraska State Line.

There is unquestionable evidence that the present method of sewage disposal by Denver is contaminating the waters of the South Platte river with typhoid and colon bacilli. This water is used in irrigating truck gardens, where most of the vegetables consumed in Denver and the Denver trade area are raised. Examination of these irrigated fields below Denver showed fecal material in close contact with the vegetables themselves. Vegetables coming into the Denver market from this area have been examined by competent bacteriologists. Even after thorough washing these vegetables have been found to be contaminated with organisms which are associated with human excreta.

There is little doubt that the very high incidence of typhoid fever, dysentery, and the diarrheas of infancy in this vicinity is directly due to the fact that the people of Denver have to eat vegetables irrigated by sewage-laden water.

The infant mortality rate in Colorado is a disgrace to the state. It is 44 per cent higher than in the United States Registration area as a whole. It is 80 per cent higher than in Kansas. It is 36 per cent higher than in Wyoming, 64 per cent higher than in Utah, and 92 per cent higher than in Nebraska, according to the latest available figures of the United States Public Health Service. Much of this high infant mortality occurs in Denver and along the line of the South Platte river from Denver to the state line. It is undoubtedly caused in part by the fact that children in the above-named district eat sewage-contaminated food.

The situation has assumed such dangerous proportions that federal officials are now seriously considering an edict to bar vegetables raised in this area from interstate commerce.

As long as Denver continues to dump raw sewage into the South Platte River, nothing can improve the existing condition, for the city must of necessity obtain most of its truck-garden produce from this area, and the life and health of every citizen is therefore in constant danger.

We cannot urge too strongly that you who are responsible for the health of the people of Denver take immediate steps to eliminate this unnecessary hazard. The way to do this is to construct a modern sewage disposal plant for the city without further delay.

At this time the United States Government is most generous in advancing money for sewage disposal plants. We urge that no time be lost in requesting a government loan for such a plant since funds for public works of this nature may soon be exhausted.

We further urge that such a proposal to either the government or the voters of Denver shall not be entangled in a request for other appropriations. Should such a proposal fail because it has been lumped with a less vital project or because you have not acted immediately and energetically, the responsibility for a wretched situation must lie directly at your door.

Very truly yours,

THE COLORADO STATE MEDICAL SOCIETY.
By E. N. CHAPMAN, M.D., Colorado Springs,
Chairman,

JOHN W. AMESSE, M.D., Denver,
MARGARET LONG, M.D., Denver.

*Editor's Note: Since this letter was originally issued, it has been learned that the reports made to the State Board of Health from the University of Colorado did not emanate from the "Department of Bacteriology," but rather from the Department of Chemistry.

MEDICAL SOCIETIES

COLORADO OPHTHALMOLOGICAL SOCIETY October 21, 1933

DR. GUY HOPKINS, Presiding

Congenital bilateral external rectus paralysis: Dr. V. H. Brobeck presented a case of congenital bilateral external rectus paralysis in a girl, aged 5. The eyes were straight in primary position. No operative procedure was indicated.

Injury with a circular saw; avulsion of the optic nerve: Dr. V. H. Brobeck also presented the case of a man struck in the face with a large piece of wood thrown from a circular saw. The nose was split widely apart, the lesion running up into the brow, with a prolapse of the left eye ball. There was partial dislocation of the lens and avulsion of the optic nerve. Five weeks following the injury a large piece of wood was extracted from the tissues of the upper orbit, causing a low grade cellulitis. The third nerve was injured and the optic nerve was destroyed.

Dynamite explosion; multiple foreign bodies in both eyes: Dr. V. H. Brobeck's third case presented was that of a man injured in a dynamite explosion in a mine. The upper two-thirds of the face and scalp were severely injured by innumerable small pieces of powder and rock. The upper lids of both eyes were ragged and torn, with loss of tissue and bone at the inner third of each lower lid. Both lacrimal sacs had been torn away. The right eye was so badly injured that enucleation was necessary. In the left eye there were foreign bodies in the cornea and conjunctiva. There was beginning traumatic cataract with foreign bodies in the lens. The vision was only for large objects.

Retinal detachment with cyclitic membrane: Dr. G. H. Stine presented a case of retinal detachment with cyclitic membrane, probably due to an injury fifteen years previously. The eye was totally blind. A diagnosis of intraocular tumor was also considered, and enucleation of the eye was advised.

Tuberculous sclerokeratitis: Dr. G. H. Stine also presented a case of tuberculous sclerokeratitis in an otherwise healthy young man, aged 22. There was an episcleritic nodule near the lower temporal limbus and deep corneal opacities in the temporal and central cornea. A local and focal reaction to .001 mg. of tuberculin had occurred. The condition responded very well to local treatment and weekly injections of gradually ascending doses of B. E.

GEORGE H. STINE, Recorder.

THE COLORADO SOCIETY OF CLINICAL PATHOLOGISTS

The regular fall meeting of the Colorado Society of Clinical Pathologists was held October 21 with an attendance of twenty. Dinner was served at the Parisienne Rotisserie, after which the society adjourned to the Medical School for the scientific program.

Dr. Carl W. Maynard of Pueblo presented the Lewis and Canti films illustrating embryonic and cancer cell tissue culture.

The following officers were elected for the ensuing year: Dr. Louisa T. Black, president; Dr. Paul Carson, vice-president; Dr. Paul Garvin, secretary-treasurer.

PAUL D. GARVIN,
Secretary.

DENVER COUNTY

The first November meeting of the Medical Society of the City and County of Denver was held

November 7, in the Auditorium of the Capitol Life Building.

Dr. James Burris Perrin was elected to membership.

A report of the Committee on Relations with Denver General Hospital was given by Dr. George L. Monson. Dr. Monson stated that efforts were being made by this committee to have the Denver General Hospital use the same questionnaire in the admission of patients as that used by Colorado General Hospital. The committee also suggested that Denver police make an effort to find out the physician and hospital of the patient's choice.

Dr. Paul Connor discussed the question of a Denver sewage disposal plant. A letter from the Denver Chamber of Commerce requesting information on this subject was read by the secretary. Dr. A. L. Beagler reported that the Platte River Contamination Committee report was not ready at this time. A motion was made and passed by the society approving the erection of a sewage disposal plant.

The following reports of Committees were read and approved by the Society: Committee on Relations with Public Schools, by Dr. Roy P. Forbes; Committee on Professional Charities, by Dr. Wm. H. Halley; Committee on Dues, by Dr. G. M. Blickensderfer; Committee on Medical Economics, by Dr. Philip Hillkowitz; and Committee on Workmen's Compensation, by Dr. W. W. King.

Mr. Benson of the Collection Agency gave a talk on collections. A motion was made and passed to appoint a committee of three to meet with a like committee of dentists and a committee from Mr. Benson's office.

Dr. B. B. Jaffa reported for the Board of Health concerning the status of the smallpox situation. Dr. G. M. Blickensderfer read a report from the Board of Trustees regarding a new "ways and means fund" for entertainments and procuring of out-of-town speakers.

O. S. PHILPOTT, Secretary.

* * *

EL PASO COUNTY

The regular monthly meeting of the El Paso County Medical Society was held at the Day Nursery on Wednesday, November 8.

Dr. Geo. H. Stine talked on "The Treatment of Strabismus," and Dr. Wm. C. Black of the University of Colorado Medical School spoke on "Agranulocytosis," recent investigations, particularly that of Morris and Addison (Gastric Hormone).

CARL S. GYDESEN, Secretary.

* * *

MESA COUNTY

The regular meeting of the Mesa County Medical Society was held October 17 at the La Court Hotel in Grand Junction.

Dr. E. H. Peterson gave a talk on "Cirrhosis of the Liver," and Mr. Robert Whipple talked on "Ascheim-Zondeck Test for Pregnancy."

H. M. TUPPER, Secretary.

* * *

PUEBLO COUNTY

Dr. C. H. Darrow of Denver was the guest speaker of the first November meeting of the Pueblo County Medical Society held at the Hotel Congress, Tuesday, November 7, 1933. Dr. Darrow gave an interesting paper on the "Increasing Use of the Bronchoscope." Dr. Harvey Rusk discussed the paper.

The second November meeting was held Tuesday, November 21, at the Congress Hotel. Dr. H. A. Black delivered a paper on "Treatment of Inoperable Carcinoma of the Uterus."

J. L. ROSENBLOOM, Secretary.

WYOMING SECTION

President, F. L. Beck, Cheyenne

Vice President, J. L. Wicks, Evanston

Secretary, Earl Whedon, Sheridan

President-elect, H. L. Harvey, Casper

Treasurer, Evald Olson, Meeteetse

Delegate to A. M. A.: G. P. Johnston, Cheyenne; Alternates: E. L. Jewell, Shoshoni; G. L. Strader, Cheyenne

Councillors: G. P. Johnston, Cheyenne J. H. Goodnough, Rock Springs F. C. Shafer, Douglas

Medical Defense Committee: Earl Whedon, Sheridan R. H. Sanders, Rock Springs E. L. Jewell, Shoshoni

EDITOR:

EARL WHEDON, M.D., Sheridan, Wyoming

EDITORIAL NOTES AND COMMENT

Our President's Message

ELSEWHERE will be found a message from our President, F. L. Beck. Read and think over what Dr. Beck has written. There is much food for thought and something must be worked out along the paths suggested by our President.



Colorado Tick Fever

WHEN the term Tick Fever is used in Wyoming, most of the Wyoming physicians think in terms of the Rocky Mountain spotted fever. Personally we have never liked the expression "Rocky Mountain Spotted Fever," as we have felt it was too limited. This same disease is found elsewhere and not confined to the Rocky Mountain region. It occurs in the eastern states, in the counties bordering the Mediterranean Sea, in South America and elsewhere.

It is true that it has been given more study in the Rocky Mountain region and perhaps for that reason it is appropriate to use that designation. There is another disease now known as "Colorado Tick Fever," that has not been so carefully studied by the western physicians, but which must be given more attention. It is not the same disease as Rocky Mountain Spotted Fever, and we believe that many cases are occurring outside of Colorado and even in Colorado that are not being diagnosed as such.

To refresh our minds, let us consider the outstanding characteristics of "Colorado Tick Fever." First it is transmitted by the

wood tick just the same as Rocky Mountain Spotted Fever, Tularemia, and Tick Paralysis. It follows the bite of the wood tick (*Dermacentor andersoni*), but the onset is more severe and the fever rises faster in a shorter time and the pulse rate is higher than in Spotted Fever. Then the fever drops in a day or two only to shoot up again as a second phase. But there are no spots as in the case of true Rocky Mountain Spotted Fever. Colorado Tick Fever is accompanied by more pains in the back, joints and legs, and the onset is more stormy than in cases of Rocky Mountain Spotted Fever.

All attempts to reproduce the infection in laboratory animals by inoculations have failed. Blood from the Colorado Fever patients will not agglutinate proteus X organisms in significant titer.

We hope to devote part of one day in arranging the program for the next annual meeting of the Wyoming State Medical Society to the subject of the wood tick and the diseases it can transmit to man. Papers are requested on these subjects. There are men in Wyoming, Montana, and Colorado who can and ought to write these papers and give their knowledge to the medical world.

Doctors are not better or brainier than other men. By and large, physicians are just as inclined to smoke too much, eat too much, drink too much as are the rest of us. They are not better sons, husbands, or fathers.

Yet if you balance the books of the events of the last fifty years, and write down the lasting achievements of this half century, you will find the medical men not far from the top of your list.—Collier's.

ANENT MEDICAL CARE OF THE INDIGENT IN WYOMING

F. L. BECK, M.D.*
CHEYENNE

Dr. R. K. Packard of Chicago says, in a paper published in a recent number of the Illinois Medical Journal, "I do not think I would be far out of the way by saying that 90 per cent of the medical care of indigents in the United States at the present time is being given by the medical profession free. In a communication recently mailed to the Secretary of the State Medical Society of every state in the Union and by further correspondence with nearly fifty other people who are familiar with this work, it is clearly demonstrated that in the vast majority of indigent work the physician is not paid. In fact, in 90 per cent of the correspondence received it was stated that physicians' services were free. It is generally assumed, for some reason or other, perhaps through customs of years gone by, that it is his duty to render his services to indigents free of charge."

In the last very few years various plans have been proposed here and there for the more satisfactory medical care of the indigent and for rendering the attending physician some compensation for his work. The plan which has seemed the most acceptable is the so-called Iowa Plan or some modification of it. This plan contracts with the County Commissioners to furnish service to the indigent poor for a certain sum per year. Members of the society who desire to share in this service sign an agreement to have the society act as their agent in negotiating such a contract with the County, and they agree to do the work when called upon.

In other counties in Iowa, Minnesota, and Wisconsin a scale of fees is agreed upon ranging from one-fourth to one-half the regular schedule, the County paying upon presentation of bills.

Pusey said, in his President's Address to the Secretaries of State Medical Societies assembled in Chicago last November, "Medicine undertakes to do its full share of practice for the indigent without compensation. It recognizes that the experience which prac-

tioners get in this way, especially in institutions, matures skill and judgment, and thus furnishes partial or full compensation for some of this practice. It accepts a large part of the charity practice which it does as a proper contribution by the profession to the welfare of mankind. But it points out that medicine's traditional spirit in this respect is abused; that the support of the indigent, including the supplying of their medical necessities, is an obligation of society as a whole. Accordingly, medicine should take the position that communities should carry their obligation for the medical care of the sick poor, and the profession should resist the tendency that exists of unduly imposing this burden on the profession."

In Wyoming, as I suppose in every other state, funds have been contributed by counties, by municipalities, charitable organizations and individuals for providing food, clothing, shelter, and fuel for the poor, but so far as I know, no provision has been made for providing medical care, it evidently being taken for granted that the doctors would furnish that in addition to their share in taxation and their cash contributions for the support of many charities. One exception to this is the employment of county physicians whose usual work is that of caring for transients, prisoners, and inmates of the poor farm.

So far, the State of Wyoming has not contributed to any such charities. During the last year or two some federal funds have been available—a small amount in outright donation in emergencies, and an equal amount to be matched with local relief funds in the proportion of one dollar to three. So far as I have been able to learn, none of these funds have been used to pay for medical service. But now the federal government, through the Federal Emergency Relief Administration, has ruled that under prescribed limitations these funds may be so used in the treatment of persons who are receiving the benefit of relief funds. The plan governing such use of federal funds is

*President, Wyoming State Medical Society.

outlined in Bulletin No. 7 of the Relief Administration. It is also published in the Journal of the A. M. A. of September 23, page 1026.

At the present time the State of Wyoming is receiving very little of these funds for the reason that, even though the counties and municipalities did contribute large sums for the care of the poor, especially transients, two or three years ago, the local appropriations for these causes have been dwindling until now the Government's share of one dollar to three dollars of local funds is almost insignificant.

Recent reports show that there are from ten to twelve thousand unemployed men in Wyoming, a very large proportion being heads of families, and every responsible estimate from communities where need exists predicts the coming winter will bring greater demands than ever upon relief funds. Governor Miller is very much concerned about this situation. While he would be opposed to the appropriation of funds for relief purposes if the counties and municipalities can take care of the matter, it appears that they are not thus able, and that if we are to secure any federal funds of consequence to assist in relief the State must furnish in some way a large part of the basic fund to match up with that coming from Washington. No doubt this was in the governor's mind when the call was made for a special session of the legislature.

Now, if there is to be any change from the old custom of having the physicians, dentists, and nurses furnish all the medical, surgical, obstetrical, dental and nursing care of the indigent gratis it will be necessary for each of these professions to contract with the relief agencies to furnish its part of that service according to the rules laid down by the Federal Relief Administration. I think you will agree with me, on reading these rules, that they are very fair, explicit, and sufficiently complete.

This writer is not insisting that the physicians of the state shall undertake the plan here proposed. However, it is undoubtedly true that many in our ranks are fast approaching the time when they themselves

must be the recipients of bounty. Reports recently received show that a number are receiving compensation for not more than 25 per cent of their work, and some for as little as 10 and even 5 per cent. Many nurses are in no better circumstances, and certainly some dentists are not in position to be dispensing charity.

Accepting the probability that the professions in a number of counties will desire to enter into agreement with the County Commissioners or other agencies handling relief funds for the care of the indigent sick, a committee representing the State Medical Society has been appointed to act in an advisory capacity with the State Relief Committee. It will also be the duty of this committee to formulate a schedule of fees which may be charged for this class of work. It will be essential that each County Medical Society have a similar committee to act with the County Relief Committee or Commissioners.

I think it should not be designed that this plan be limited to work paid for by federal funds. I can see no reason why any family being cared for by relief funds from any source should not be permitted to employ its own physician and he be recompensed according to this arrangement.

Obituary

A. H. Hoff

On October 2, 1933, Dr. Hoff passed on at his home in Casper following an illness of one month's duration. He had retired from active practice at Casper and in looking back he could recall many of the early days in Natrona County.

He was born September 5, 1858. His medical work was taken at Drake University. He was a charter member of the Casper Chamber of Commerce when it was organized in 1903. For many years he was one of the leading physicians and surgeons of Casper. During the early days he made his distant calls by horse and buggy, or on horseback when the old gumbo roads were not passable with a buggy. He was a public spirited citizen and gave to Casper his best services.

Dr. Hoff turned his business over to Dr. J. C. Kamp and entered the sheep business for several years until his retirement.

Mrs. Francis Caryl of Keokuk, Iowa, is a daughter. The doctor also adopted a girl and a boy, Eva and Edward Hoff. Dr. Hoff's wife died three years ago. Casper has lost, in Dr. Hoff's death, one of the truest type of the beloved country doctors of yesterday.

E. W.

WYOMING STATE MEDICAL SOCIETY

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